

New Mexico Mining Minerals Division
Mine Registration Program
Uranium Mill Registration Files

MMD AUM No	Mine Reg No	Mill Name	Operator	Mining Status	special handling
NA	48	Ambrosia Lake Mill	Mine Registration Program	Permanent Closure, Active Reclamation	
NA	552	Bluewater Mill	Mine Registration Program	Permanent Closure, Reclaimed	
NA	321	Homestake Mill	Mine Registration Program	Permanent Closure, Active Reclamation	

New Mexico Mining Minerals Division
Mine Registration Program
Uranium Mine Registration Files

MMD AUM No	Mine Reg No	Mine Name	Operator	Mining Status	special handling
NA	473	Lee Mine	Quivira Mining Company	Never Mined	
NA	413	Marquez Mine	Marquez Development Corp.	Never Mined	large mine map
NM0066	455	Mt. Taylor Mine	Rio Grande Resources	Temporary Suspension	large mine map
NM0048	54	Section 10 Mine	Southwest Resources, Inc.	Permanent Closure, No Reclamation	
NM0053	1035	Section 12 Mine	Southwest Resources, Inc.	Permanent Closure, Active Reclamation	
NM0046	771	Section 14 Mine	Southwest Resources, Inc.	Permanent Closure, Active Reclamation	
NM0021	628	Section 17 Mine	Rio Algom Mining	Permanent Closure, Active Reclamation	
NM0036	629	Section 19 Mine	Rio Algom Mining	Permanent Closure, Reclaimed and Released	
NM0013	630	Section 22 Mine	Rio Algom Mining	Permanent Closure, Active Reclamation	
NM0015	631	Section 23 Mine	Homestake Mining	Permanent Closure, Reclaimed and Released	large mine map
NM0016	632	Section 24 Mine	Rio Algom Mining	Permanent Closure, Active Reclamation	
NM0018	633	Section 25 Mine	Homestake Mining	Permanent Closure, Reclaimed and Released	large mine map
NM0012	634	Section 30 Mine	Rio Algom Mining	Permanent Closure, Active Reclamation	
NM0035	635	Section 30 West Mine	Rio Algom Mining	Permanent Closure, Reclaimed and Released	
NM0031	1036	Section 32 Mine	Homestake Mining	Permanent Closure, Reclaimed and Released	
NM0022	636	Section 33 Mine	Rio Algom Mining	Permanent Closure, Active Reclamation	
NM0019	637	Section 35 Mine	Rio Algom Mining	Permanent Closure, Active Reclamation	
NM0017	638	Section 36 Mine	Rio Algom Mining	Permanent Closure, Reclaimed and Released	

Ambrosia Lake Mill
Rio Algom Mining (Quivira, Kerr-McGee, Kermac)
USGS Quad: Ambrosia Lake

6

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Grants looks to reclaim title of "Uranium Capital of the World"

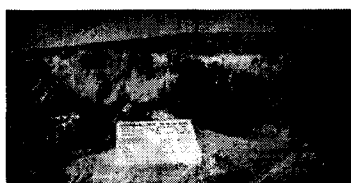
 By Erik Siemers (Contact)
 Monday, November 12, 2007


Photo by Michael J. GallegosTribune

Tribune

A stone marker sits at the foot of a closed uranium mine 25 miles north of Grants. The pile of clay rock seen in the background covers nearly 7 million dry tons of tailings, the byproducts of the mining operation.

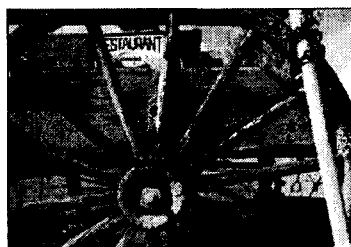


Photo by Michael J. GallegosTribune

Tribune

An old wooden wagon sits in the empty parking lot of the abandoned Monte Carlo Restaurant on Santa Fe Avenue, the main road through Grants. The building is one of the oldest in the city and stands across the street from the new post office building in downtown Grants.

It might have been the tombstone for an industry.

The neatly inscribed chunk of rock 25 miles north of Grants marks the final resting place of about 7 million dry tons of tailings - the finely crushed radioactive leftovers of extracting uranium from rock - from the mill site at Ambrosia Lake.

It's meant as a warning sign of the 1,850 curies of radon located within the massive pile.

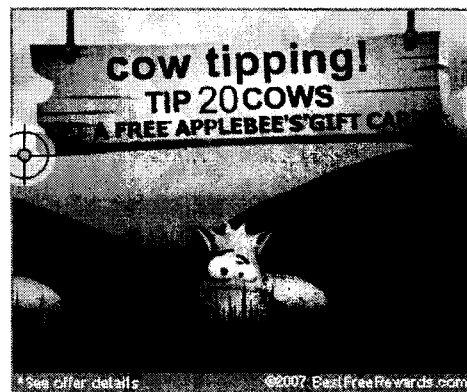
But it's also a symbol of what's left of a town that once was - a tombstone for the "Uranium Capital of the World."

Grants, as the locals are proud to say, isn't dead. But its role as the uranium capital, as headquarters of a district that mined more uranium than any other in the United States, fell just as the price of the commodity plummeted in the early 1980s.

"We're talking about bringing them back."

Rick Van Horn says this on a drive through the old Ambrosia Lake mining site north of Grants. It's his company, Uranium Resources Inc. of Lewisville, Texas, that has renewed hope among many that Grants could soon reclaim its old title.

URI last month agreed to buy Rio Algom Mining LLC and a mill license from BHP Billiton Ltd. for about \$126.5



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- Terry Mattingly: Mormons caught between God and Christianity
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- Bush signs bill for tax-break for strapped homeowners
- Authorities seize more than 2 tons of marijuana in New Mexico in one day
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- New Mexico MVD audit finds 63 dubious licenses

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MOST RECENT TRIB



Christmas Day meal for Albuquerque firefighters
Ambrosia Lake, south of Grants, N.M., is a closed uranium mine that could be a bonanza for 1980s-style miners
07:46 a.m., December 26, 2007

New Mexico juvenile inmate better after getting mental health treatment
07:12 a.m., December 26, 2007

service could create up to 4,000 jobs within the Grants Mineral Belt, leaving officials within Grants to harbor dreams of a mining renaissance.

TRIB IN THE BLOGOSPHERE*

"This is ~~very exciting~~," said Star Gorzales, executive director of the Grants/Cibola County Chamber of Commerce, whose office is a testament to the area's mining lineage; it's also the home for high schools, the New Mexico Mining Museum, RealEstateJournal | Foreclosure Activity May Have Peaked

"We don't view this as a huge economic boost," everybody | Real estate

Connecting bloggers

Grants, a town named after the three brothers commissioned to build a railroad there, from the late 1800s saw its economy shift around livestock, logging and even carrots.

and is not responsible for the

blogosphere's headlines and stories.

These links to blogs talking about a

piece of rock on a highway.

generated. Use them at your own risk.

at a better time.

STORY TOOLS

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The federal government in 1947, on the eve of the Cold War, created the Atomic Energy Commission and was seeking new sources of nuclear energy for weapons production, said Jon Incall, a Santa Fe attorney for the Uranium Producers of America.

SHARE THIS STORY

Martinez's discovery sparked a flood of mining interest in the region. At least five uranium mills emerged there by 1960, according to a brief history of the area provided at the New Mexico Mining Museum.

million in cash.

That includes paying \$16.5 million for a Nuclear Regulatory Commission license to build and operate a conventional uranium mill at the Ambrosia Lake site.

Operating a mill - one that will ultimately be capable of processing 8,000 tons of uranium ore a day - is a necessary key that will allow mining companies to commence work in the area, opening a new door for New Mexico's long-dormant uranium mining industry. It comes at a time when the demand for clean-producing energy, such as nuclear power, is re-emerging.

Van Horn, the company's executive vice president and chief operating officer, said the mill and the mines it will

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- ☐ High School Sports
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- ☐ Wolf Tracks



The AEC became the primary buyer of uranium ore.

"The industry was really as much a child of the government," Indall said. "They entered into these contracts, and they set up ore-buying stations. They did everything they could, the AEC, to create this industry from private companies."

Uranium sparked unprecedented growth in the Grants Valley. In 1950, the year of Martinez's discovery, the town had a population of around 2,200. That would reach 7,000 by 1955 and 10,000 by 1960, according to the local history.

Grants officially was a boomtown.

"I saw the money they were making," state Sen. David Ulibarri, a Grants Democrat, recalling when he took a mining job with Homestake after his high school graduation in 1967. "One thing I can remember is they were good jobs, and people were happy."

By 1968, the federal government decided it had gathered enough uranium ore, Indall said. "They went back to the (mining) companies and stretched out those deliveries to keep the industry alive until 1970, when the utilities were to start buying it," Indall said.

That led to a temporary lull, but the industry sparked again in the mid-'70s as the nation began to focus on nuclear power as an emerging fuel source. Private utilities soon replaced the federal government as the primary buyer of uranium ore, bringing the industry to a new peak.

By 1978, New Mexico saw a record yearly production of 9,371 tons of uranium that was shipped to mills and buying stations, according to a report from the state Bureau of Geology and Mineral Resources at New Mexico Tech in Socorro.

Grants was surging. By 1980, the city's population swelled to 11,439. The local high school athletic teams - the Grants Pirates - were large enough to compete in the state's highest division against the big Albuquerque schools.

The local newspaper, the Grants Daily Beacon, featured an atomic symbol by its name above the words in the uranium capital.

The streets of Grants and nearby Milan were filled with a melting pot of personalities and shiny new pickups, some locals say.

"Grants was a pretty fast-moving town. It was one of the most interesting towns anywhere," said Bill Stevens, 79, who managed the Ambrosia Lake site for Kerr-McGee Corp. through 1979.

On the first Wednesday of each month, about a dozen men who once managed the mines and mills of the Grants area convene over barbecue sandwiches in Albuquerque.

They call themselves the Dinosaurs Club and sit in a dimly lit room, around a large wooden table, talking about stock prices, industry news and, often, the old days.

Milan, one says, was once called "trailerville" for all of the portable housing that existed there for the mining families.

And they were paid well.

Workers in the uranium industry then could earn from \$22,000 a year to \$75,000 for the most accomplished miners, said Jack Burgess, 70, who managed several mines during that era and now works as an independent consultant for the mining industry.

"Money was flowing," said Tim Hurley, a mine safety consultant from Albuquerque who managed mines for Kerr-McGee and Ranchers Exploration & Development Co. "They had their pickups, their boats, hunting rifles. You know, toys."

The boom also spawned a sense of local entrepreneurship in some.

"I have a brother, and he saw these trailers coming in, and they didn't have washing machines and dryers and all these things," said Abe Peoa, 81, a local historian who has written several books on the history of the region. "He set up all these coin-operated laundries."

But a confluence of circumstances was to emerge that would bring an end to the industry in the region.

The 1979 accident at Three Mile Island nuclear power plant in Middletown, Pa., caused no deaths, but nonetheless bolstered a perception that nuclear power plants were dangerous.

Overproduction in the 1970s and 1980s led to large stockpiles of uranium, and the dismantling of U.S. and Russian nuclear weapons reserves added to that, according to the state Bureau of Geology and Mineral Resources report.

Ultimately, it was the diminished market price for uranium that caused the mines and mills of Grants to shut down.

In 1974, the market price for uranium was around \$8 per pound. It shot up to around \$40 a pound by 1978. But as the market dwindled, the price fell to around \$20 a pound in 1982 and even lower into the 1990s.

By 1989, all conventional underground and open-pit mines in New Mexico closed, according to the state Bureau of Geology and Mineral Resources report.

"When it crashed, it was devastating," said Gonzales of the Chamber of Commerce.

Peca, the historian, said the local unemployment rate shot up to over 30 percent.

"A lot of foreclosures. A lot of anxiety among people. The miners that came from elsewhere in their trailers by and large left," Peca said. "You could see hundreds of homes on the market for sale."

Today, with about 9,000 residents, Grants has diversified its economy, in large part thanks to employment opportunities from two state prisons, Gonzales said. A billboard along the side of the road where vehicles exit Interstate 40 shows a corrections officer welcoming visitors to the area.

But a need remains.

"The job need is great for higher paying jobs. And the (corrections officer) job seems to be very tough, either for background restrictions or just the nature of the beast," Gonzales said. "There's a need for more."

Now, Grants finds itself back in a familiar position, eager to usher in another wave of uranium mining on the verge of a new nuclear age.

The re-emergence comes as that stockpile of uranium has been whittled down, the cost of natural gas increases and the world becomes more aware of environmental drawbacks of generating electricity, said David McIntyre, spokesman for the Nuclear Regulatory Commission.

The NRC has recently received two applications for new reactors - one in south Texas, another in northern Alabama. They are the first applications for new reactors in 30 years, McIntyre said.

"We're expecting a number of new applications for up to 32 reactors over the next two or three years," he said.

With that demand comes a surge in price. The weekly spot price for uranium has ranged from \$70 to \$140 a pound this year, and it hit \$90 a pound last week, according to data from Ux Consulting Co., a Roswell, Ga., uranium consulting and market analysis firm.

And the ground remains fertile with uranium, local industry experts say.

About 350 million pounds of uranium have been extracted from the Grants Mineral Belt, Van Horn said. He and Indall both cite estimates of up to 600 million pounds that remain unmined.

Indall said about eight "fairly substantial" companies and another four or five smaller firms have been staking claims in the Grants area since about 2003.

Many of the old-time miners question whether that much uranium ore exists. Stevens said he looks at such statistics with some skepticism.

"Most people think uranium is a rare element. It's all over," Stevens said. "But only in rare circumstances is it concentrated where you can extract it and make a profit."

But URI hopes to do just that.

The company's purchase of the Ambrosia Lake site is expected to close by June 1. Van Horn said it will take 18 months to two years to construct a mill on the footprint of the former Kerr-McGee mill at the site.

At the early stages, the company will be able to process 3,000 tons of uranium a day with plans to grow to 8,000 tons a day once the industry gets back into full gear.

While the re-emergence of uranium brings with it the hope of a vibrant economy, some people in Grants are equally cautious about relying too much on an industry that could vacate with a dip in the markets.

"A lot of people have some founded fears of them coming and leaving, not taking care of the community in which they live," said Gonzales. "We've had extensive conversations with these companies and let them know we expect some infrastructure and community support. . . . In another generation or so, it could be played out again."

But Indall says the uranium industry will stick around for a while.

"We're not going to be producing 40 million pounds a year in New Mexico anytime soon. But we are going to be producing, let's say, 10 or 15 million pounds eventually, once they get the mill going," Indall said. "If you do the math, that's probably 30 to 40 years that this should continue."

As a man who knows about history, Peca knows that means another boom for Grants.

"Money does crazy things," he said. "It's hard to predict."

TRIB TALK: WHAT ARE YOUR COMMENTS ON THIS STORY?

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Posted by rvc789 on December 17, 2007 at 10:29 p.m. (Suggest removal)

The mines will bring much needed work to the area but what coverage has there been on the people living in San Mateo and other surrounding areas that the mines will directly effect. Grants will get the economy boost but what price might the residents of the towns the mines will be in have to pay?



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Telephone: (505) 476-3400
FAX No.: (505) 476-3402

FORM 10: ANNUAL REPORT
OF
URANIUM MILLING OPERATIONS

10
Old Stope Leaching/Ambrosia Lake Mill
Quivira Mining Co.

An annual report is to be filed for each calendar year period from January 1 through December 31. Reports are to be received by the Mining and Minerals Division **before April 30** of the following year. **Please submit a separate form for each operation.** Data in this report covers calendar year **2002**. Forms can also be found at www.emnrd.state.nm.us/mining/map/mapforms.htm.

Name of Company: Rio Algom Mining LLC
Address: PO Box 218, Grants, NM USA 87020
Mill Name: Ambrosia Lake Mill MSHA Number: 2900776
Location: County McKinley 1/4-1/4 Sec. A11 Section 31 Township 14N Range 9W
Directions to Location if Unsurveyed: _____
Manager or Person in Charge and Title (please print): Mr. Terry Fletcher General Manager
Address: same as above Telephone: () 505-287-8851
Start Up Date: 1958

1. Was there a change in mill name, owner or operating company during the reporting year?

☒ Yes

☐ No

If yes, give date of change: 2/12/02
(month / day / year)

Nature of Change: Became a limited liability corporation

2. If a subsidiary of a larger company, provide the following information:

Name of Parent Company: Rio Algom Mining LLC
Address: 6305 Waterford Blvd, Ste. 325, Oklahoma City, OK 73118
Telephone: () 800-931-1190

3. Type of Operation: ☒ Conventional ☐ Insitu Leach

a.	Insitu Leach Rated Production Capacity:	Gallons/minute	<u>3800</u>
	Average Utilized Capacity:	Gallons/minute	<u>700</u>
b.	Conventional Mill Rated Capacity:	Tons/day	<u>7000</u>
	Average Utilized Capacity:	Tons/day	<u>0</u>
c.	Do you custom mill?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	If yes, what quantity (Lbs.) of total recovery was custom milled? _____		

4. Mill Employment Information:

a.	Total Average number of direct employees:	<u>18</u>	(total number at mill; do not include employees at mine)
b.	Total number of days of operation:	<u>365</u>	
c.	Total yearly payroll:	\$ <u>866 000</u>	
d.	Average number of contract employees, haulers, etc. (do not include in total direct):	<u>5</u>	

5. Description and Value of Improvements Made During Year

a. Power Plant:

\$ _____

b. New Structure(s):

\$ _____

c. Existing Structure(s):

\$ _____

d. Equipment:

\$ _____

e. Other (specify):

\$ _____

TOTAL: \$ 0

6. Production, Recovery and Value During year

8. Voluntary Information: Voluntary responses to the following questions would be helpful to the Department. Any other additional information would be appreciated.

Delivery contracts:

a. Domestic Utilities

N/A

b. Foreign Utilities

I hereby swear or affirm that the information herein provided is true, complete and correct.

Terry I Fletcher
Signature

Date: 4/25/03

(PLEASE COMPLETE ALL OF THE FOLLOWING LEGIBLY)

Terry Fletcher

Name (please print)
General Manager

Title: _____

Address: PO Box 218

Grants, NM USA 87020

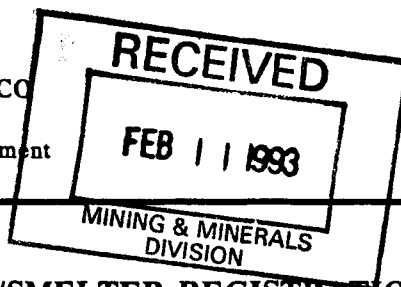
E-mail: tfletcher@ramc.net





STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195



MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill/Smelter: Ambrosia Lake Mill
Name of Company: Quivira Mining Company Telephone: (505) 287-8851
Address: Box 218, Grants, NM 87020
Manager or Person in Charge and Title (please print): Arthur E. Gebeau, General Manager
Name of Previous Company (if applicable): _____
Location: County McKinley 1/4-1/4 all Sec. 31 Township 14N Range 9W
Directions to Location if Unsurveyed: _____
USGS Quadrangle Map Name: _____
MSHA Number: 2900776 Start Up Date: 1958

Please list all Standard Industrial Classification (SIC) codes for this operation: _____

MINE TYPE: ☐ Surface ☐ Adit ☐ Heap Leach ☐ Shaft ☐ In Situ Leach

☒ MILL ☐ SMELTER ☐ Other (describe) _____

Minerals or Commodities Produced: _____

Minerals or Commodities Processed: Uranium

Status: ☒ Active ☐ Intermittent ☐ Inactive ☐ Under Development

Capacity: (indicate cu.yds. or tons, and per day, month or year) 6000TPD at peak

Mineral Estate Owner: Name: Quivira Mining Company

Address: Box 218, Grants, NM 87020

Telephone: (505) 287-8851

Surface Estate Owner: Name: (same)

Address: (same)

Telephone: () (same)

Mineral Estate Classification: (Please check)

☐ State ☐ Federal
☐ Indian ☒ Private

I hereby swear or affirm that the information
herein provided is true, complete and correct,
and that all information on this form may be
released.

Arthur E. Gebeau
Signature

Arthur E. Gebeau
Name (please print)

Title: General Manager

Address: (as above)

Date: February 10, 1993

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505



GARREY CARRUTHERS
GOVERNOR

April 6, 1990

ANITA LOCKWOOD
CABINET SECRETARY
ROBERT M. EVETTS
DEPUTY SECRETARY

MEMORANDUM

TO: Tim Leftwich, Director
FROM: Bill Hatchell, Chief MIS *BH*
SUBJECT: Ambrosia Lake Tailings Reclamation (Quivira)

Quivira Mining (now Rio Algom, formerly Kerr McGee) is in the process of uranium tailings reclamation and management on a 325-acre, 36 million-ton pile at its Ambrosia Lake facility. The pile falls under Title 2 as NRC-regulated, utility-generated tailings. The Phillips pile, just 1 mile northeast of Quivira, is under Title 1, UMTRA (DOE) as defense-generated tailings.

The Quivira project is budgeted under 2 stages: Stage 1 (\$43 million) is underway, and will be highlighted below. Stage 2 will involve the eventual dismantling of the mill itself and burial within the tailings pile and final rock (rip-rap) capping over a 6-inch to 1-ft. borrow-material mantle.

This type of operator-managed reclamation project should eventually get Congressional budgeting with a 3-way cost split involving utility companies, the uranium producers and the Federal Government. This is included in the various uranium revitalization bills circulating through Congress, none of which have yet been passed.

Following are bulleted highlights of the Quivira project:

- 325-acre pile to be broadened to about 400 to 450 acres with original slopes of 1:2 made to 1:5 and total height at least doubled.
- Ponds drained and slimes removed to core of pile
- Windblown tailings surrounding pile already recovered and placed in pile under a 6-inch borrow dirt cap.

VILLAGRA BUILDING - 408 Galisteo
Forestry and Resources Conservation Division
P.O. Box 1948 827-5830

Park and Recreation Division
P.O. Box 1147 827-7465

2040 South Pacheco
Office of the Secretary
827-5950

Administrative Services
827-5925

Energy Conservation & Management
827-5900

Mining and Minerals
827-5970

LAND OFFICE BUILDING - 310 Old Santa Fe Trail
Oil Conservation Division
P.O. Box 2088 827-5800

- Entire pile surrounded by a sump ditch up to 60-ft. deep dug into the underlying Mancos Shale bed rock.
- Outer periphery beyond the ditch set with groundwater monitoring wells under jurisdiction of EID with NRC concurrence.
- Water drained from old ponds now in a new lined pond meeting EID/NRC specs.
- Any new material that might be added from start up of production will be placed on top of old pile.
- Background levels being achieved at 20 or less pico-curies. (Santa Fe City background ranges from 12 to 22).
- Terry Fletcher is the reclamation project manager at Quivira; Hal Whitacre is the General Manager; Art Gebeau is the Production Manager.
- Quivira continues to produce yellowcake from mine water (IX) recovery at the rate of 200,000 lbs. per year.

Tim, another visit can be rescheduled whenever you want. We have an open invitation from Quivira.



MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill/Smelter: Ambrosia Lake Mill

Name of Operator: Quivira Mining Company Telephone: 287-8851

Address: P.O. Box 218, Grants, New Mexico 87020

Name of Previous Operator (if applicable): _____

Location: County McKinley 1/4-1/4 All Sec. 31 Township 14N Range 9W

Directions to Location if Unsurveyed: _____

USGS Quadrangle Map Name: Ambrosia Lake

MSHA Number: 2900776

Type of Operation: (please check)

MINE: Surface _____ Adit _____ Other _____
Shaft _____ In Situ Leach _____
Mill X Smelter _____ Heap Leach _____

Mineral or Commodity Produced: Uranium

Mineral Estate Owner: Name Bank of Commerce
Address P.O. Box 17089, Ft. Worth, Texas 76102
Telephone _____

Surface Estate Owner: Name Quivira Mining Company
Address P.O. Box 218, Grants, New Mexico 87020
Telephone 287-8851

Mineral Estate Classification: (Please check)

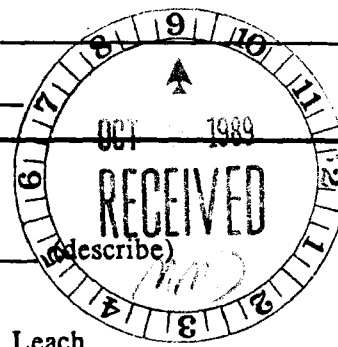
State _____ Federal _____ Indian _____ Private X

I hereby swear or affirm that the information
herein provided is true, complete and correct.

[Signature]
Signature

Title: General Manager
Address: P.O. Box 218
Grants, NM 87020

Date: 10-10-89



DO NOT WRITE IN THIS SPACE

Registration Number Assigned _____
By: _____

Signature

Title: _____
Date: _____

11-11-68



DO NOT WRITE IN THIS SPACE

6B ✓ 10 ✓

REPORT OF SAFEGUARDING

Name of Operator: ARCO Coal Company

Address: P. O. Box 638, Grants, New Mexico 87020

Mine Name: Bluewater Mill MSHA Number 24 Cancelled 12N 11W Mill

Location: County Cibola 1/4-1/4 N¹/₂ Sec. 13 Township 12N Range 11W Tail

Directions to Location if Unsurveyed: Eight miles northwest of Grants, New Mexico

Type of Operation (please check):

Surface Mine Adit Other X Closed Uranium Mill
Shaft Insitu Mineral Mined Uranium Being Decommissioned

DESCRIPTION OF MATERIALS AND PROCEDURES USED IN COMPLETED SAFEGUARDING: (include quantities of materials)

Property perimeter is fenced with signs proscribed by the United States Nuclear Regulatory Commission. Twenty-Four hour security patrols restricted areas.

DATE OF COMPLETION:

I hereby swear or affirm that the information herein provided is true, complete and correct.

R. S. Ziegler
Signature

Title: Project Manager, Bluewater Mill

Address: P. O. Box 638
Grants, New Mexico 87020

Date: 7-8-90

ARCO Coal Company
Bluewater Mill
Post Office Box 638
Grants, New Mexico 87020
Telephone (505) 876-2211



February 8, 1990

68 - 10 ✓
Received 6/23/86
ROS 2/8/90
Calc Date 10/24/91

Tim J. Leftwich
Mining and Minerals Division
2040 South Pacheco St.
Santa Fe, New Mexico 87505

Dear Tim:

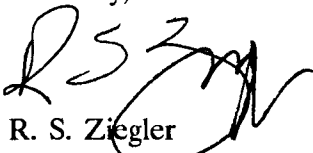
Attached are the following completed forms per your request of January 10, 1990.

Form 1	Registration
Form 10	Annual Report
Form 13	Report on Safeguarding

For your information, the Bluewater Uranium Mill is currently being decommissioned (demolished) under an approved United States Nuclear Regulatory Commission Plan. The Mill is permanently closed and will not reopen.

Please call if you have any questions.

Sincerely,


R. S. Ziegler
Project Manager

jmn

Attachment


FEB 1990
RECEIVED
Mining & Minerals
Division



MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill Smelter: Bluewater Mill
Name of Operator: ARCO Coal Company Telephone: (505) 876-2211
Address: P. O. Box 638, Grants, New Mexico 87020
Name of Previous Operator (if applicable): ---
Location: County Cibola 1/4-1/4 N $\frac{1}{2}$ 24 12N 11W Mill
Sec. 13 Township 12N Range 11W Tails
Directions to Location if Unsurveyed: Eight miles west of Grants, New Mexico
USGS Quadrangle Map Name: Grants 2SW QUAD 7.5 MIN. TOPO
MSHA Number: Cancelled

Type of Operation: (please check)

MINE: Surface ☐ Adit ☐ Other ☐ (describe)
Shaft ☐ In Situ Leach ☐
Mill ☒ Smelter ☐ Heap Leach ☐

Mineral or Commodity Produced: Closed Uranium Mill/Being decommissioned under approved NRC Plan

Mineral Estate Owner: Name ARCO Coal Company
Address P. O. Box 638, Grants, New Mexico 87020
Telephone (505) 876-2211
Surface Estate Owner: Name ARCO Coal Company
Address P. O. Box 638 Grants, New Mexico 87020
Telephone (505) 876-2211

Mineral Estate Classification: (Please check)

State ☐ Federal ☐ Indian ☐ Private ☒

FEB 1990
RECEIVED
Mining & Minerals
Division

I hereby swear or affirm that the information
herein provided is true, complete and correct.

R. S. Ziegler
Signature

Title: Project Manager, Bluewater Mill
Address: P. O. Box 638
Grants, New Mexico 87020

Date: 2-8-90

DO NOT WRITE IN THIS SPACE	
Registration Number Assigned	_____
By:	_____
Signature	_____
Title:	_____
Date:	_____

Homestake Grants Mill
Homestake Mining Co.
USGS Quad: Grants

f3



Homestake's mission in Cibola County

CIBOLA COUNTY - Project Manager Alan Cox of Homestake Mining Company wants people to know what the company is doing here.

"We stayed very, very quiet," he said of the site at NM 605, five miles outside of Milan. "Our focus at this site ... we're trying to do our ground water remediation," Cox said, adding that it has taken years and will continue for several more to clean the ground water and tailing piles. He said it is hard to explain to people exactly what the employees do at the remediation site, but they do maintain it and the clean up is going well. Contaminants recently found outside the pond area that are higher than the Environmental Protection Agency and New Mexico Environmental Department standards for water are being addressed.

There are two methods of water cleaning methods at the facility that work together: reverse osmosis and evaporation.

The reverse osmosis (RO) method has been operating at the site for six years. A 300,000-gallon water system was installed around 1999, and in 2002 Homestake doubled the capacity to 600,000 gallons, Cox said.

"Reverse osmosis is a filtering system," he explained. "It's a very fine filter system." He noted the process pulls out metals and contaminants. The clean water is injected back into the aquifer, he said. The company recently added trenches around the site, as a hydraulic barrier in the aquifer to contain contaminated ground water until it is extracted and collected.

The water is first drawn from the ground and is filtered several times, and the water's pH is increased to "basic" to drop out the calcium and minerals, he explained. Then it is filtered through the RO and put back into the ground. The pH level is adjusted with sulfuric acid during the process to normalize the water's pH level.

The sludge from the water softening system goes into the staging pond and then to evaporation ponds, which are lined, he said.

The evaporation method at the site is what people see from NM 605. They may see two staging ponds and then the small tailing ponds that spray water into the air. It does not operate at night and is offline in the winter to prevent freezing.

Cox explained that only the liquid part of the water evaporates into the air, and then

contaminants settle into the lined pond. It was always a viable method because of the dry air in the southwest, he said.

Toward the end of the project the ponds containing contaminants will be dried, reclaimed and moved to the current spraying pond. The cleaning and RO equipment will be buried with those contaminants at that location, he explained, then Homestake will cover it with a radon barrier and put rock on top of it.

"That's the conventional closure of the tailings ponds," Cox said, adding that was how it was done at Ambrosia Lake and the former Kerr-McGee sites.

Cox maintained it could take another 10 years to complete the project, but that can change. If the company meets the requirements set by the Nuclear Regulatory Agency, and there is a more cost-effective and faster method, then the company will probably use it.

"They are continuing to evaluate site cleanup and reclamation, and looking at various options," he said.

When they were extracting uranium from ore and producing yellow cake many years ago, the waste material from that was finely grounded and put in a pile. That is referred to as the "tailing piles," he said.

Cox explained that the areas that are not lined are the original milling tailing piles; however, a pond on top of the large tailing pile is lined, and Homestake continues to extract the contaminants from the tailings piles.

The large pile holds 20 million tons of tailings and the smaller one holds two million.

He said excessive amounts of rain affects cleanup. In one way it is good, because new water is added to the ground water, but when it rains the evaporation ponds need to be put on standby and that slows cleanup.

Homestake's property covers 14,000 acres in Cibola County. The company leases 12,000 acres to local ranchers for grazing and 100 acres has alfalfa. Homestake regularly samples the soil and cuttings.

He said a percentage of the cost for cleanup is paid for by Homestake and a percentage is paid for by the federal government through the Superfund. A superfund site is made when no one has liability for what was mined, he explained. Cox does not know what the percentages are, but they are based on the length of time the government owned and operated the mines using contracted companies and when the mines were privatized and sold for operation.

In regard to recent mining exploration in Cibola County, Cox said that Homestake will not be exploring, but it could receive royalties by selling its mining licenses. He also commented that current mining methods, like the leaching method, differs from 30 to 50 years ago and does not require laborers to bring ore out of the ground.

By Ilene Haluska

Homestake's mission in Cibola County

CIBOLA COUNTY - Project Manger Alan Cox of Homestake Mining Company wants people to know what the company is doing here.

CCSO receives Mobile Command Vehicle

GRANTS - The Cibola County Sheriff's Department has a new Mobile Command Vehicle.

A look at Animal Control

GRANTS - One of three animal control officers resigned from the Grants/Cibola County Animal Control department last month.

Spay/neuter discounts available in October

MILAN-Pet owners can take advantage of a twice-yearly discount spay/neuter offer throughout October in Grants and Milan.

Business loses \$8,000 of equipment in burglary

GRANTS - Advanced Mechanical on E. Santa Fe Avenue announced it lost \$8,000 in equipment during a burglary last weekend.

MainStreet elects new board members

GRANTS-Long without a full board of directors, Grants Mainstreet Project elected four new board members in a general meeting last week.

Health Council hears about possible flu pandemic

GRANTS - Margot White of the University of New Mexico Medical School gave a presentation on the characteristics and challenges of a possible pandemic flu outbreak to the Comprehensive Community Health Council Thursday at the Future Foundations Family Center in Grants.

Local artists are active this fall

GRANTS - The artistically creative folks in our community have been busy winning prizes and planning shows as summer turns to fall.

MK

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
MINING AND MINERALS DIVISION
MINE REGISTRATION AND GEOLOGICAL SERVICES

SAFEGUARDING INSPECTION CHECKLIST

Mine/Company: Homestake IX Plant / Homestake

Company phone: 287-4456

Date of inspection: 5/27/93

Name of inspector: KSH

Others present: Art Behan

Location of mine (legal description or directions to site):

Check all the following that apply:

Shaft: ☐ Adit: ☐ Pit: ☐ Quarry: ☐ Mill: ☒ Highwall(s): ☐

Pond: ☐ Other: ☐ (Describe):

Commodities produced: Ur

Safeguarding methods used: (describe all that apply)

Slope of pit walls or tailings:

Guardrails, fencing, berms or other at highwalls:

Fencing around property: (types, locks, etc.)

Warning signs:

Backfilling of shafts, adits, and auger boreholes: (how far into opening)

Personnel on site: ☐ Guards: ☐

Temporary closure methods used: (if mine is temporarily suspended)

Openings sealed with steel reinforced concrete or masonry wall:

Shafts sealed with steel reinforced concrete slab or cable net closure:

Wire fence:

Barbed wire (4 strands):

Cable closure:

Heavy rope closure:

Support posts painted fluorescent color:

Other:

Beginning priority classification:

Ending priority classification (to date): 0

Follow up action needed for operator to perform:

Other comments: May not have been registered due to ^{possible} closure prior to 89-1. ^{check.}

Signature of inspector: K. H. H. H.

Title:

Agency:

Address:

Review by MMD Director: Date: Initials:

CHECK LIST

NISO date:

ROS date:

Topo:

Reports:

Correct -
was not registered



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

copyied
Mining and Minerals Div.
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195

**NOTICE OF INTENTION
TO SUSPEND OPERATIONS**

DO NOT WRITE IN THIS SPACE

6B

Name of Company: Homestake Mining Company of California
Address: PO Box 98, Grants, NM 87020
Mine or Mill Name: Grants Mill MSHA Number: 2900775
Location: County Cibola 1/4-1/4 full Sec. 26 Township 12N Range R10W
Directions to Location if Unsurveyed: _____
Start Up Date: 1958

Type of Operation (please check):

Surface Mine ☐ Adit ☐ Mill ☒ Other ☐
Shaft ☐ Insitu ☐ Mineral Mined or Milled ☐

Check One: Permanent ☒ Temporary ☐ Suspension Date July 10, 1992

DESCRIPTION OF SAFEGUARDING PROCEDURES AND MATERIALS USED: (Note: Safeguarding guidelines are available upon request from MMD).

Mill Decommissioning and Decontamination Plan has been submitted to the Nuclear Regulatory Commission (NRC) as per NRC regulations. The mill buildings and process equipment will be disposed of by burial or salvaged and is scheduled to begin mid-1993.



Signed by: *F. R. Craft*
Name (please print) Fredrick R. Craft
Title: Resident Manager
Address: PO Box 98
Grants, NM 87020
Telephone: (505) 287-4456
Date: March 2, 1993

DO NOT WRITE IN THIS SPACE
Approved: *Yes*
By: *R. Headgraham*
Signature
Title: Director
Date: April 6, 1993

APR 2 1953



MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill Smelter: Homestake Mining Company - Mill
Name of Operator: Homestake Mining Company Telephone: 287-4456
Address: Post Office Box 98, Grants, New Mexico 87020
Name of Previous Operator (if applicable): _____
Location: County Cibola 1/4-1/4 full Sec. 26 Township 12N Range 10W
Directions to Location if Unsurveyed: _____
USGS Quadrangle Map Name: Grants, NM
MSHA Number: 2900775

Type of Operation: (please check)

MINE: Surface _____ Adit _____ Other _____ (describe)
Shaft _____ In Situ Leach _____
Mill x Smelter _____ Heap Leach _____

Mineral or Commodity Produced: uranium oxide

Mineral Estate Owner: Name _____
Address _____
Telephone _____

Surface Estate Owner: Name Homestake Mining Company
Address Post Office Box 98, Grants, NM 87020
Telephone 287-4456

Mineral Estate Classification: (Please check)

State _____ Federal _____ Indian _____ Private x

I hereby swear or affirm that the information
herein provided is true, complete and correct.

Signature [Signature]

Title: Resident Manager
Address: PO Box 98
Grants, NM 87020

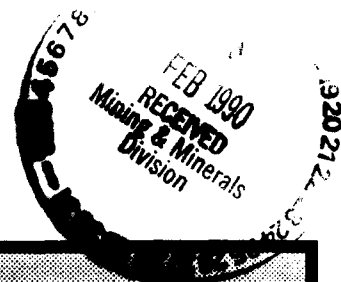
Date: 2-14-90

DO NOT WRITE IN THIS SPACE

Registration Number Assigned _____

By: _____ Signature _____

Title: _____

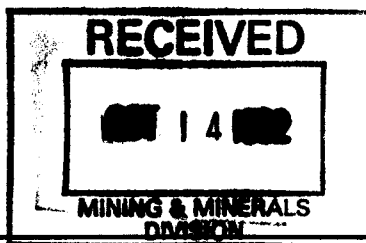




Lee Mine
Quivira Mining Co
USGS Quad: San Mateo



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department



Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195

NOTICE OF INTENTION TO SUSPEND OPERATIONS

DO NOT WRITE IN THIS SPACE

Name of Company: Quivira Mining Company
Address: P.O. Box 218, Grants, NM 87020
Mine or Mill Name: Lee Mine MSHA Number: n/a
Location: County McKinley 1/4-1/4NW/NE Sec. 17 Township 13 Range 8
Directions to Location if Unsurveyed: _____

Type of Operation (please check):

Surface Mine _____ Adit _____ Mill _____ Other _____
Shaft X Insitu _____ Mineral Mined or Milled Uranium

Check One: Permanent X Temporary _____ Suspension Date Development halted in 1982.

DESCRIPTION OF MATERIALS AND SAFEGUARDING PROCEDURES: (Note: Safeguarding guidelines are available upon request from MMD).

The shaft collar was covered with 6" steel beams to support a steel plate which was welded in place. The cable access tunnel from the building basement was blocked with a steel plate welded in place and the building doors were welded shut. The gate on the access road to the minesite is kept locked and is checked by our people or the surface owner on a regular basis.

Signed by: Arthur E. Gebeau
Name (please print)
Title: General Manager
Address: P.O. Box 218
Grants, NM 87020
Telephone: (505) 287-8851, ext 200

Date: 10-13-92

DO NOT WRITE IN THIS SPACE

Approved Yes

By: Phyllis Graham

Signature

Title: Director

Date: Oct. 14, 1992



MINE/MILL/SMELTER REGISTRATION

Name of Mine/~~Mill~~/Smelter: Lee Mine

Name of Operator: Quivira Mining Company Telephone: 287-8851

Address: P.O. Box 218, Grants, New Mexico 87020

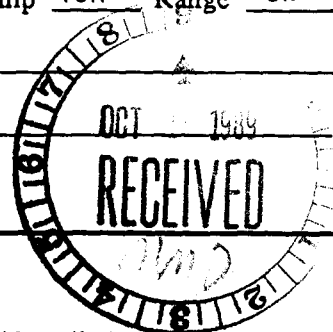
Name of Previous Operator (if applicable): _____

Location: County McKinley 1/4-1/4 NE/NW Sec. 17 Township 13N Range 8W

Directions to Location if Unsurveyed: _____

USGS Quadrangle Map Name: Ambrosia Lake

MSHA Number: 2900541



Type of Operation: (please check)

MINE: Surface _____ Adit _____ Other X (describe)
Shaft X In Situ Leach _____ (Shaft in development stage)
Mill _____ Smelter _____ Heap Leach _____

Mineral or Commodity Produced: Uranium - no production

Mineral Estate Owner: Name Fernandez
Address _____
Telephone _____

Surface Estate Owner: Name Cerrillos Land Company
Address 6200 Uptown Blvd. NE, Ste 400, Albuquerque, NM 87125
Telephone _____

Mineral Estate Classification: (Please check)

State _____ Federal _____ Indian _____ Private X

I hereby swear or affirm that the information
herein provided is true, complete and correct.

R. E. Whitcomb
Signature

Title: General Manager
Address: P.O. Box 218
Grants, NM 87020

Date: 10-10-89

DO NOT WRITE IN THIS SPACE

Registration Number Assigned _____
By: _____

Signature

Title: _____
Date: _____

Marquez Mine & Mill
Juan Tafoya Grant (Marquez Dev., Bokum Resources)
USGS Quad: Marquez



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Douglas M. Bland
Director
Mining and Minerals Division

October 13, 2000

Mr. K.E. McKorkle
C/O Marquez Development Corporation
P. O. Box 13958
Albuquerque, NM 87192

Dear Mr. McKorkle:

This letter responds to your letter of October 4, 2000 enclosing photographs of the safeguarded mine and vent shafts for the Marquez Mine and Mill site located in McKinley County, NM which has been closed pursuant to the NM mine safeguarding requirements (19 NMAC 7.2).

The Mining and Minerals Division of the Energy, Minerals and Natural Resources Department has reviewed the photographs and finds that you have met the State's safeguarding requirements.

If you have any questions or comments I can be reached at 827-1352.

Sincerely,


John Pfeil

MARQUEZ DEVELOPMENT CORPORATION

October 4, 2000

Mr. John Pfeil
New Mexico Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505

Dear Mr. Pfeil:

Please be advised that Marquez Development Corporation has completed the permanent closure and safeguarding of the Marquez Mine and Vent Shafts located in McKinley County

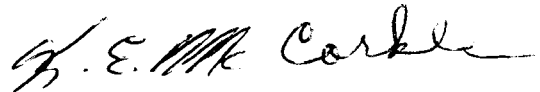
All site restoration and safeguarding activities were conducted and completed in accordance with the criteria as specified in the Notice of Intention to Suspend Operations (Form 12-Attachment A) submitted to your office on March 6, 2000. As per your request, photographs of the Safeguarded Mine and Vent shafts are enclosed.

It is our belief that we have satisfactorily met the State of New Mexico's safeguarding requirements (19NMAC 7.2) and that no further action is required.

Should you have any questions or require further information, please contact me.

Thank you for your cooperation.

Sincerely,



K. E. McCorkle
Vice President of Operations

MINE AND VENT SHAFT PHOTOGRAPH IDENTIFICATION

- No. 1 **Mine Shaft**—looking West—Safeguarded Mine Shaft contiguous with head frame support slab and drainage apron. The terrain north and south of the support slab is sloped to ensure that surface water drainage is directed away from the support slab and capped mine shaft.
- No. 2 **Mine Shaft**— and head frame support slab with drainage apron—looking West.
- No. 3 **Mine Shaft**—looking East.
- No. 4 **Mine Shaft**—looking Southwest.
- No. 5 **Vent Shaft**—looking South—Safeguarded Vent Shaft contiguous with auxiliary hoist support slab. The terrain east and west of the Vent Shaft and hoist support slab is sloped to ensure that surface water drainage is directed away from the support slab and the capped vent shaft.
- No. 6 **Vent Shaft**—looking Southwest.
- No. 7 **Vent Shaft**—looking East.
- No. 8 **Vent Shaft**—looking North.











State of New Mexico
Energy, Minerals and Natural Resources Department



GARY E. JOHNSON

GOVERNOR

JENNIFER A. SALISBURY

CABINET SECRETARY

DOUGLAS M. BLAND

DIVISION DIRECTOR

March 9, 2000

Mr. K.E. McKorkle
C/O Marquez Development Corporation
P. O. Box 13958
Albuquerque, NM 87192

Dear Mr. McKorkle:

This letter responds to your letter of March 8, 2000 enclosing a change of registration/change of ownership or operator, and a notice of intent to suspend operations (NISO). Our mine registration database will be updated accordingly. The NISO has three attachments including: A – Permanent Closure and Safeguarding; B – Drainage; and C – Mine and Vent Shaft Cap Design. This submittal relates to the Marquez Mine and Mill site located in McKinley County, NM which is being closed pursuant to the NM mine safeguarding requirements (19 NMAC 7.2).

The Mining and Minerals Division of the Energy, Minerals and Natural Resources Department has reviewed the materials and finds that the design is satisfactory in meeting the State's safeguarding requirements. Once the safeguarding has been implemented, which will occur sometime late this year, kindly make John Pfeil of my staff aware of this fact. Some pictures showing the final result would be appreciated.

You should direct any questions or comments related to this closure to John Pfeil at 827-1352.

Sincerely,

Douglas M. Bland, Director

MARQUEZ DEVELOPMENT CORPORATION

March 6, 2000

Mr. John Pfeil
New Mexico Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505

Dear Mr. Pfeil:

Pursuant to our telephone conversation of February 24, 2000 please find the following submittals for your review:

1. Notice of Intention to Suspend Operations—Form 12 (with attachments)
2. Change of Registration/Ownership—Form 2

A timely response would be greatly appreciated, as we would like to commence mine decommissioning and safeguarding as soon as possible.

Should you have any questions or require further information, please contact me.

Thank you for your cooperation.

Sincerely,



K. E. McCorkle
Vice President of Operations



CHANGE OF REGISTRATION

Each mine, mill and smelter operator in New Mexico shall notify the Mining and Minerals Division in writing prior to any reactivation of operations, or any changes to the original information contained in Form 1, Mine/Mill/Smelter Registration. In the event of a change of ownership or operating company, complete the reverse side of this form in addition to the information requested below.

Name of Company: MARQUEZ DEVELOPMENT CORPORATION
Address: PO BOX 13958 ALBUQUERQUE, NM 87192
Mine/Mill Name: MARQUEZ MINE & MARQUEZ MILL
Location: County McKINLEY 1/4 1/4 Sec. - Section 36 Township 13N Range 5W
Directions to Location if Unsurveyed: N/A
Name of Person in Charge: KENNETH E. McCORKLE
Title: VICE PRESIDENT OF OPERATIONS Telephone: (505) 247-9008
Address: PO BOX 13958
ALBUQUERQUE, NM 87192
Effective Date of Change: 3-06-2000

Please describe any changes below:

THE MARQUEZ MILL WILL BE COMPLETELY DISMANTLED
THE MARQUEZ MINE WILL BE PERMANENTLY CLOSED.

K.E. McCorkle
Signature

K.E. McCorkle
Name (please print)

Title: VICE PRESIDENT OF OPERATIONS

Address: PO BOX 13958, ALBUQUERQUE
N.M. 87192

Telephone: (505) 247-9008

Date signed: 3-06-2000



CHANGE OF OWNERSHIP OR OPERATOR

I, KENNETH B. McCORKLE, of MARQUEZ DEVELOPMENT CORPORATION

(Company) do hereby acknowledge the transfer for the purpose of ownership and/or operation of the following mine, mill, or smelter

to - SEE ATTACHED SHEET - (Company),

whose principal place of business is: MARQUEZ, NEW MEXICO

Mine, Mill or Smelter Name: MARQUEZ MINE MSHA Number: 2901597

Location: County Mc KINLEY 1/4-1/4 Sec. - Section 36 Township 13N Range 5W

Directions to Location if Unsurveyed:

N/A

I hereby swear or affirm that the information herein provided
is true, complete and correct.

I, _____

of _____

(Company) have read the foregoing statement and accept such
transfer, also the responsibility of ownership and/or operation
of said mine, mill or smelter.

K. E. McCorkle
Signature

K. E. McCorkle
Name (please print)

Title: VICE PRESIDENT OF OPERATIONS

Address: PO BOX 13958

ALBUQUERQUE, NM 87192

Telephone: (505) 247-9008

Date signed: 3-06-2000

Signature

Name (please print)

Title:

Address:

Telephone: ()

Date signed:

CHANGE OF OWNERSHIP OR OPERATOR (FORM 2)

Please Note:

Marquez Development Corporation has leased the land on which the mine and mill are located from the Juan Tafoya Land Grant Corporation since 1977. The current lease will expire on 12/31/00. Marquez will not renew the lease.

Effective immediately upon lease expiration and/or termination, the Juan Tafoya Land Grant Corporation will assume all responsibilities for the maintenance of the mill and mine sites including the continual safeguarding of the mine and vent shafts.

All questions pertaining to the mine after the effective date of lease expiration/termination should be referred to:

Mrs. Ruth Armijo, President
Juan Tafoya Land Grant Corporation
3081 Benny Rd. S.W.
Albuquerque, N.M. 87105
Phone: 505-877-2530



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195

NOTICE OF INTENTION
TO SUSPEND OPERATIONS

For MMD use only

Name of Company: MARQUEZ DEVELOPMENT CORPORATION
Address: PO BOX 13958 ALBUQUERQUE, NM 87192
Mine or Mill Name: MARQUEZ MINE MSHA Number: 2901597
Location: County: MCKINLEY 1/4-1/4 Sec. - Section 36 Township: 13N Range 5W
Directions to Location if Unsurveyed: N/A

Photos and/or videos of the mine site may be filed with this form if desired.

Start Up Date: N/A

Type of Operation (please check):

Surface Mine Adit Mill Other
Shaft X Insitu Mineral Mined or Milled

Check One: Permanent X Temporary Suspension Date
Temporary Suspension with responsible person(s) on site at all times

DESCRIPTION OF SAFEGUARDING PROCEDURES, MATERIALS AND FINAL SLOPES, AND TIMETABLE FOR COMPLETION OF SAFEGUARDING: (Note: Safeguarding guidelines are available upon request from MMD).

REFER TO ATTACHMENTS A-C

K.E. McCorkle
Signature

K.E. MC CORKLE
Name (please print)

Title: VICE PRESIDENT OF OPERATIONS

Address: PO BOX 13958

ALBUQUERQUE, NM 87192

Telephone: (505) 247-9008

Date signed: 3-06-2000

For MMD use only

Approved Disapproved

By:
Signature

Title:

Date:

NOTICE OF INTENTION TO SUSPEND OPERATIONS (FORM 12)

ATTACHMENT A
PERMANENT CLOSURE AND SAFEGUARDING

The permanent closure and safeguarding of the Marquez Mine will consist of the following tasks:

- 1) Mine dismantling and foundation removal
- 2) Backfill and site restoration
- 3) Permanent sealing of mine and vent shafts with concrete caps
- 4) Safeguarding
- 5) Final reclamation

List below are the key activities and estimated timetables associated with each task.

Task 1 - Mine Dismantling and Foundation Removal
(March 13 - March 27, 2000)

- Permanent electrical reconfiguration and disconnection of substation
- Asbestos containing material (ACM) removal/disposal
- Removal/disposal of fluids from mine equipment
- Dismantling of hoist building
- Removal of hoist and related mine equipment
- Removal of mine substation/switchgear
- Removal of hoist building foundation
- Dismantling and removal of headframe
- Analytical testing of soils
- Removal/disposal of petroleum impregnated soil--if required

It should be noted that some of the aforementioned activities may be conducted concurrently.

Task 2 - Backfill and Site Restoration
(March 27 - April 5, 2000)

Clean native soil will be used as backfill for all voids resulting from foundation removal. All disturbed areas will be topped with 6" - 8" of native topsoil then graded and sloped in a manner that will divert surface water runoff away from the mine and vent shafts while matching the topography of the surrounding terrain (Refer attachment B- "Drainage")

Task 3 - Permanent Sealing of Mine and Vent Shafts with Concrete Caps
(April 5 - April 20, 2000)

Reinforced concrete caps will be constructed and placed over the mine and vent shaft openings in accordance with the approved design criteria as presented in Attachment "C"

Task 4 - Safeguarding
(April 24 - May 5, 2000)

After the (reinforced) concrete has cured, the caps will be inspected for structural defects as well as to ensure that the shaft opening/cap interface is completely sealed. Repairs, if required, will be conducted immediately.

Safeguarding for both the mine and vent shafts will proceed as follows:

Mine Shaft

The open space between the concrete cap and the top of the sub-collar (i.e. @ surface elevation) will be back filled with clean native soil. A chain link security fence, 24' x 24' x 8' high, including a 1-foot extension arm (@45° angle) furnished with three separate strands of barbed wire will be installed around the surface of the sub-collar/shaft area.

Metal signs (24" x 30" each) will be positioned at the center of each outward facing side of the security fence. Signs will be fastened to the top fence bar with heavy-duty bolt clamps. The signs will have a white background with the following foreground lettering in both English and Spanish: **WARNING-DANGER** (in Red), **DO NOT ENTER** (in black). Letter sizing will be such that the signs can be read from a distance of 50 ft.

Rip-rap (24" - 36" diameter) will be placed along the outer perimeter of the security fence to prevent vehicle access to the area directly over the capped mine shaft. To ensure that no additional weight is applied to the mine shaft cap the rip-rap will be placed on the headframe support slab which encircles the subcollar/mine shaft support slab.

As an additional safeguarding feature, the existing mine compound chain link security fence (8' high including a 1 ft. extension arm furnished with three separate strands of barbed wire) will be left in place. The mine compound entrance gate will be secured by a heavy duty chain and pad lock.

Vent Shaft

Clean native soil will be spread over the vent shaft cap to form an earthen mound of approximately 2 ft. thick. A chain link security fence 12' x 20' x 8' high including a 1 ft. extension area (@45° angle) furnished with three separate strands of barbed wire will be installed around the perimeter of the vent shaft cap and earthen mound. The type and positioning of warning signs are identical to those described for the mine shaft (above).

Rip-rap (24" - 36" diameter) will be placed along the outer perimeter of the security fence, to prevent vehicle access to the area directly over the vent shaft cap. To ensure that no additional weight is applied to the vent shaft cap, the rip-rap will be

placed on the auxiliary hoist support slab which extends outward from the vent shaft collar concrete ring and support slab.

Task 5 - Final Reclamation
(September - October, 2000)

Final reclamation of the mine site consists of:

- Final surface grading and contour (if required)
- Seeding and mulching with native seed mixtures.

NOTICE OF INTENTION TO SUSPEND OPERATIONS (FORM 12)

ATTACHMENT B
DRAINAGE

Surface water drainage will be diverted away from both the mine and vent shafts as described below:

Mine Shaft

The existing head frame support with drainage apron will remain in place. This slab was designed and constructed to provide support for the shaft sub-collar as well as to maximize precipitation and surface water drainage away from the mine shaft. Additionally, during site restoration, the area adjacent to the head frame support slab will be sloped to ensure that surface water drainage is directed away from the head frame support slab and mine shaft.

Vent Shaft

During site restoration, the existing ground surface adjacent to the east and west boundaries of the auxiliary hoist support slab will be graded and sloped to direct all surface water drainage away from the capped vent shaft.

NOTICE OF INTENTION TO SUSPEND OPERATIONS (FORM 12)

ATTACHMENT C
MINE AND VENT SHAFT CAP DESIGN

- PROJECT - INSTALL MINE SHAFT CAPS ON 1 MINE SHAFT & 1 MINE VENT SHAFT.

- PROJECT LOCATION: MARQUEZ URANIUM MINE, NEW MEXICO VENT SHAFT:

- CONCRETE CAP $10' \times 10' \times 2' = 200 \text{ cf}$

$$\text{CONCRETE WT} = 150 \text{ pcf}$$

$$\therefore W_C = 150 \times 200 = 30,000 \#$$

WEIGHT OF STEEL PLATE

$$\text{DIM. } 10' \times 10' \times \frac{3}{8}" = 3.13 \text{ ft}^2$$

$$\gamma_s = 16.37 \#/\text{ft}^2$$

$$\therefore W_s = 16.37 \times 10' \times 10' = 1637.00 \#$$

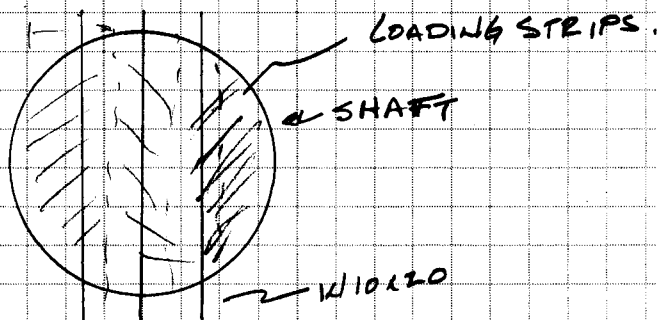
WEIGHT OF BEAMS

$$3 \text{ EA } W10 \times 22 @ 20 \#/\text{ft}$$

$$\therefore 3 (12' \times 20 \#/\text{ft}) = 720 \#$$

$$\text{TOTAL STRUCTURE WT: } 30,000 + 1,637 + 720 = 32,357 \#$$

ASSUME BEAMS CARRY ALL LOAD.



EA BEAM SHALL CARRY $\frac{1}{3}$ OF W_T

$$\text{DEAD LOAD} = 1.4 \times \frac{1}{3} \times 32,357$$

$$DL = 15,100 \#$$

$$M = \frac{wL^2}{8} ; w = \frac{1}{3} \times 15,100 \# / 10' = 505 \# / ft$$

$$M = \frac{(505) 10^2}{8} = 6312 \text{ lb-ft}$$

$$M_{\text{ALLOWABLE}} = W10 \times 19 = 467 \text{ K-ft} \quad \underline{OK}$$

ABUTMENT.

NO INFORMATION SHOWN ON PLANS.

ACCORDING TO JIM TAN W/ J.A. JONES CONCRETE
BASE IS APPRX 12" THICK.

$$EA \text{ END SUPPORT} = 15,100 / 2 = 7550 \#$$

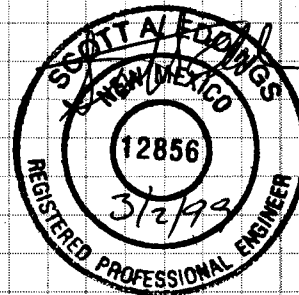
$$V = 7550 \#$$

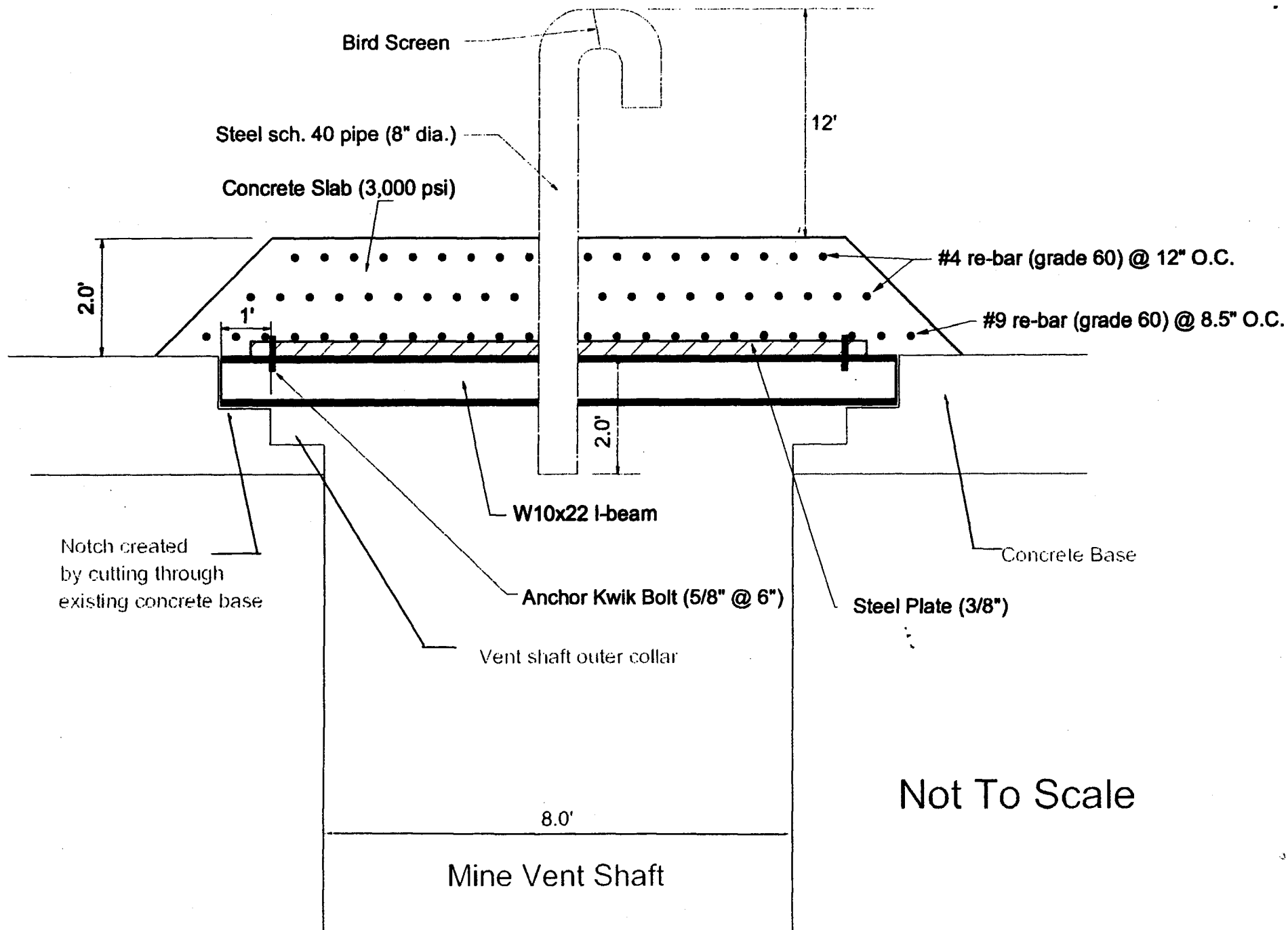
BASE PLATE DIM.

$$W 10' \times 19 \quad \text{WIDTH} = 4.02''$$

$$BP = 12'' \times 4.02'' = 48.24 \text{ in}^2$$

$$\text{LOAD APPLIED TO CONCRETE} = 7550 \# / 48.24 \text{ in}^2 = 156 \text{ psi} \quad \text{OK}$$





Top Layer re-bar @ 12" O. C.

Steel vent pipe (sch. 40 @ 8" dia.)

Projection of Concrete pad top

13' 9"

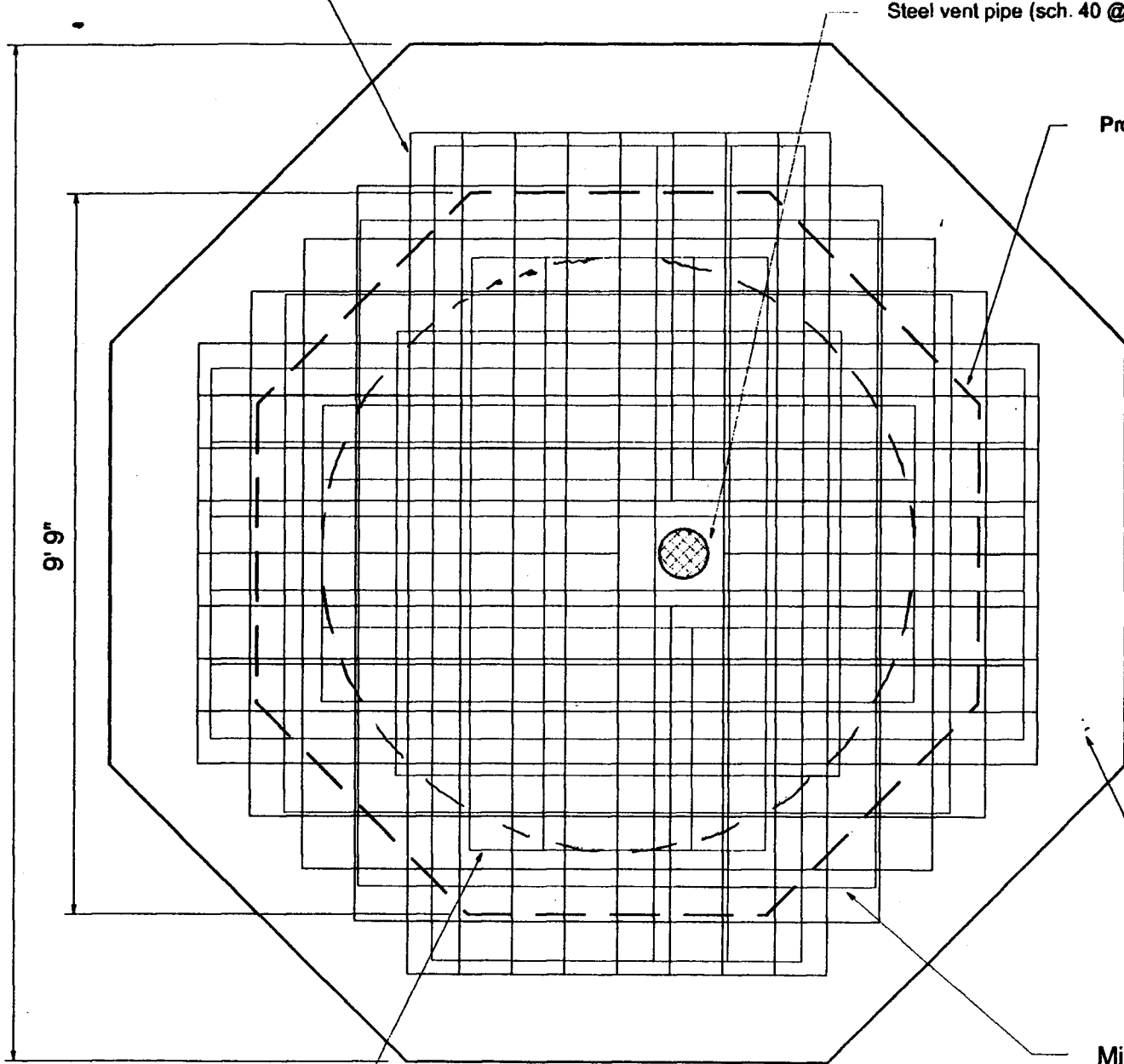
9' 9"

Concrete pad slope

Middle Layer re-bar @ 12" O. C.

Top Layer re-bar @ 12" O. C.

Not To Scale



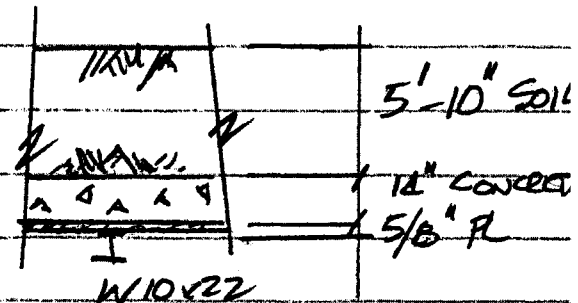


MINE SHAFT DESIGN

- GIVEN
- 1) 16" DIAMETER SHAFT
 - 2) 7' BELOW GRADE

ASSUME - No Vehicle Loading

- Sub collar of MINE SHAFT IS SUFFICIENT TO CARRY LOAD (Note - strength of CORREL ASSUMED 0).
- NO DIAPHRAM ACTION OF CONCRETE OR STEEL



DESIGN STEEL BEAMS & PLATE TO SUPPORT CONCRETE

ONLY (FORMWORK)		3'-0" SPACING
$W = (150)(1.67) = 175 \text{ #/ft}^2$ CONCRETE		525
25.5 steel Plate		76.5
22 steel beam		22
<u>222.5 #/ft</u>		<u>623.5 #/ft</u>

1'-0" SPACING OF W10x22

$$M = w l^2 / 8 = (0.2225 \text{ #/ft}) (16'')^2 / 8 = 7.12 \text{ K}$$

FOR W10x22 $S_x = 23.2$

$$\text{FOR 1'-0" SPACING } M/S = (7.12) / 23.2 = 3.1 \text{ KSI} \ll 22.6$$

$$\text{FOR 3'-0" SPACING } M = w l^2 / 8 = (0.625) (16'')^2 / 8 = 19.9$$

$$M/S = (12) (19.9) / 23.2 = 10.3 \text{ KSI}$$

CHECK SHEAR

$$V = (0.625) (8) = 5 \text{ K} \quad V/A = \frac{6}{6.44} \ll 14.4 \text{ OK}$$



CHECK 5/8" PLATE

$$W = 175 + 25.5 = 200.5 \text{ #/ft}$$

$$M = wL^2/8 = (0.200)(3')^2/8 = 0.225 \text{ K}$$

$$S = \frac{1}{6}bt^2 = \frac{1}{6}(12)\left(\frac{5}{8}\right)^2 = 0.781$$

$$M/S = (0.225)(12)/0.781 = 3.4 < 22 \text{ OK}$$

USE 5/8" W/ W10x22 SPACED
AT 3'-0"

DESIGN CONCRETE COVER

$$\begin{array}{l} W = 175 \text{ CONCRETE (14") } \\ \text{DL} \end{array}$$

$$\begin{array}{l} 130 \times 6 \text{ SOIL (6')} \\ \hline \end{array}$$

$$955 \text{ TOTAL} \times 1.7 = 1623 \text{ #/ft}$$

$$M = wL^2/8 = (1.623 \text{ K/ft})(1')^2/8 = 51.9 \text{ K}$$

$$\frac{M_u}{bd^2/12000} = K_u$$

$$\text{For } d = 12" \quad bd^2/12000 = (12)(12)/12000 = 0.144$$

$$K_u = \frac{51.9}{0.144} = 360$$

FROM ACI DESIGN HANDBOOK

$$\text{For } K_u = 369 \quad f_y = 60000 \quad \rho = 0.0075$$

$$\rho = \frac{A_s}{bd}$$

$$A_{s \text{ req'd}} = (0.0075)(12)(12) = 1.08$$

USE #9 @ 10" ($A_s = 1.20$)



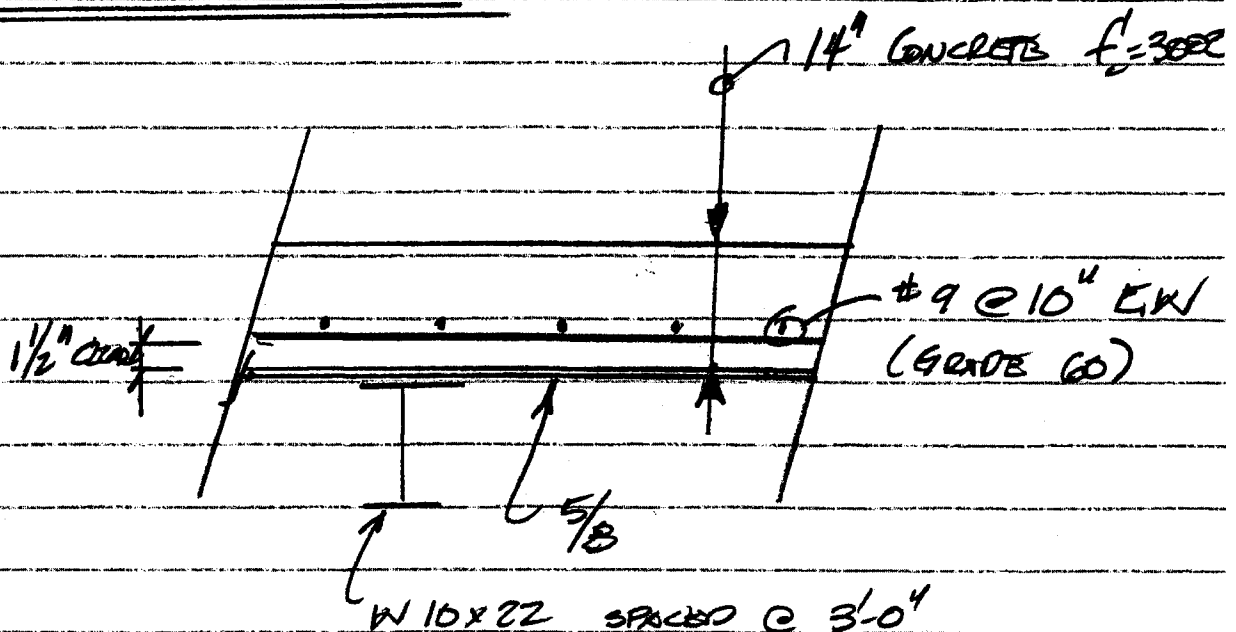
CHECK SHEAR $V_u = (1.623)(8) = 12.98^F$

$$V_c = 2\sqrt{f'_c} b d$$

$$= (2\sqrt{3000})(12)(12)$$

$$= (110)(12)(12) = 15,774 > 12,980 \quad \underline{\underline{OK}}$$

RECOMMENDED DETAILS



NOTE: FOR 2'-0 THICKNESS OF CONCRETE - THE 5/8" PLATE
AND W10x22 SPACED @ 3'-0 ARE OK
USE #9 @ 10" E.W. FOR MINIMUM REBAR



DESIGN FOR VENT CAP

SINCE SIMILAR TO MINESHIFT EXCEPT SMALLER
DIAMETER AND NO SOIL LOAD, THE SAME
DESIGN IS CONSERVATIVE

NOTE: SUPPORT OF CAP AT VENT & MINESHAPTS
HAS NOT BEEN EVALUATED

PERIMETER LOADING (MINESHIFT)

$$W = 222.5 + 780 \approx 1000 \text{ } \#/0'$$

$$\text{AREA} = \pi R^2 = (3.14)(8)^2 = 201 \text{ } 0'$$

$$\text{PERIMETER} = 2\pi R = (2)(3.14)(8) = 50.3 \text{ } \text{ft}$$

$$\text{PERIMETER LOADING} = \frac{W A}{P} = \frac{(1000)(201)}{50.3}$$

$$= 4007 \text{ } \#/\text{ft} = 4 \text{ } \text{K}/\text{FT}$$

$$\begin{aligned} & \text{(for 8" SLAB w/ REINFORCEMENT allowable load)} \\ & = (110)(6)(12)/1.4 = 5600 \text{ } \text{K}/\text{FT} \end{aligned}$$



In Discussions w/ Mr. D. Osman of JAJES, he did not want to reduce the concrete thickness or spacing of beams

Therefore check vent shaft

5/8" PL

$$w = 325.5 \text{ #/ft}$$

$$M = (0.325)(3.33)^2 / 8 = 0.45$$

$$M/S = (0.45)(12) / 0.781 = 6.92 < 22 \text{ ok}$$

W10x22

$$w = (347.5)(3.33) = 1,157$$

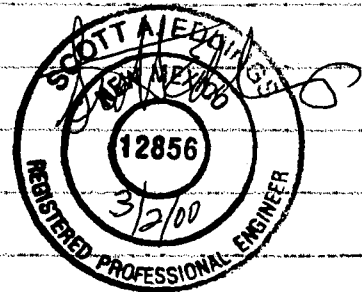
$$M = (1,157)(10)^2 / 8 = 14.5 \text{ #/ft}$$

$$f_b = (14.5)(12) / 23.2 = 7.48 < 22 \text{ ok}$$

for Ruler

California License No. 29563

Phone No. 1-865-241-4189





Scott A. Eddins
California License No. 29563

ium Mine Demolition ez. New Mexico	Job No. 092	Date 02/28/2000
	File Name	Rev. No.
	Scale Not to Scale	DWG No. 092 - 02



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

MINING AND MINERALS DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-5970

Jennifer A. Salisbury
CABINET SECRETARY

Douglas M. Bland
DIVISION DIRECTOR

February 17, 2000

Mr. K.E. McKorkle
C/O Marquez Development Corporation
P. O. Box 13958
Albuquerque, NM 87192

Dear Mr. McKorkle:

This letter responds to your letter of January 10, 2000 requesting review and comment on preliminary design drawings and calculations for a cap to permanently seal the Marquez Mine and vent shafts. The Marquez Mine is located in McKinley County, NM and is being closed pursuant to the NM mine safeguarding requirements (19 NMAC 7.2).

The Mining and Minerals Division of the Energy, Minerals and Natural Resources Department has reviewed the preliminary materials and finds that the design should be satisfactory in meeting the state's safeguarding requirements. John Pfeil of my staff has informed me that all issues raised during the review have been satisfactorily resolved.

The next step in the procedure is for you to finalize the safeguarding plan for our review. It is understood that the centerpiece of that plan will be the preliminary materials we just reviewed, and other information including the submittal of a Form 12 (Notice of Intent to Suspend Operations) and a Form 2 (Change of Registration/Ownership) if the land is transferred to another party.

Please keep in mind that our review only addresses mine safeguarding requirements under the jurisdiction of MMD, and we can not comment on whether or not your proposed closure methods will meet the requirements of any other program or agency.

I would like to commend you for your attention to detail on this subject. Your proactive stance on closure and your open communication with the Division serves the process well. You should direct any questions or comments related to closure to John Pfeil at 827-1352.

Sincerely,

A handwritten signature in dark ink, appearing to read "DMB", followed by a stylized flourish.

Douglas M. Bland, Director

2-17-00

NOTE TO FILE:

All of the concerns on the attached note were addressed in a conversation with Ken McKendall on 2-16-00.

John T. Paul

Does shaft
liner extend
into bedrock?
If not, there is a
potential for
Piping on
outside

6047

Boyd White Nat Energy Fund
801 908 5800

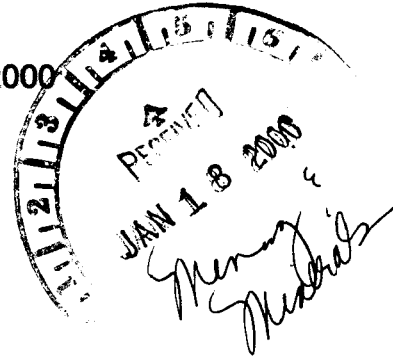
- Positive drainage above shaft by mounding dirt fill
- what is sub-cellar comprised of?
- mention discussion of vent pipe
 - 1) potential for AT being an attractive nuisance - attracting kids or motorists to along
 - 2) once there, the potential exists for inhalation of radon gas, which will almost certainly escape around the cap anyway
- Safeguarding regs require submission of NISO
30' Thick 18"

MARQUEZ DEVELOPMENT CORPORATION

CERTIFIED: P 428 995 538

January 10, 2000

Mr. Doug Bland, Director
New Mexico Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505



Dear Mr. Bland:

Pursuant to our telephone conversations in which we discussed Marquez' intention to use concrete slabs (caps) to permanently seal the Marquez mine and vent shafts, please find enclosed preliminary design drawings and calculations relating to the proposed caps for your review and comments.

A timely response from your staff would be greatly appreciated as we would like to finalize our design and construction work plan.

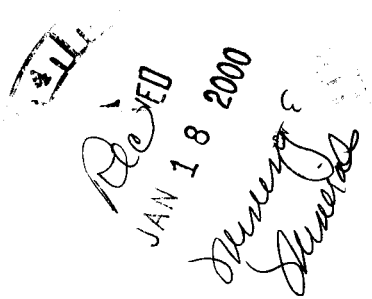
Should you have any questions or require further information, please contact me.

Thank you for your cooperation.

Sincerely,

A handwritten signature in cursive script that reads "K. E. McCorkle".

K. E. McCorkle
Vice President of Operations



CALCULATIONS AND DESIGN FOR MINESHAFT CAP

Design No. Two
(I-beam laid on top of sub-collar)

1. Total weight (not including I-beams) over the Mineshaft Span (16 feet diameter)

- (1) Area in calculation $(16 \text{ ft} / 2)^2 \times 3.1416 = 201.06 \text{ ft}^2$
- (2) Steel Plate (5/8") $25.5 \text{ lbs/ft}^2 \times 201.06 \text{ ft}^2 = \mathbf{5,127.03 \text{ lbs}}$
- (3) Concrete Slab (3,000 psi, 2' thickness)
 $201.06 \text{ ft}^2 \times 2 \text{ ft} = 402.12 \text{ ft}^3$
 $402.12 \text{ ft}^3 \times 150 \text{ lbs/ft}^3 = \mathbf{60,318 \text{ lbs}}$
- (4) Dirt fill (sand, wet, packed, 4.17' thickness)
 $201.06 \text{ ft}^2 \times 4.17 \text{ ft} = 838.42 \text{ ft}^3$
 $838.42 \text{ ft}^3 \times 130 \text{ lbs/ft}^3 = \mathbf{108,994.63 \text{ lbs}}$
- (5) Steel Sch. 40 Venting Pipe (12" dia. approx. 25 linear feet)
 $25 \text{ ft} \times 54 \text{ lbs/ft} = \mathbf{1350 \text{ lbs}}$
- (6) Re-Bars in Concrete (#5, 801.3 ft/layer)
 $801.3 \text{ ft} \times 3 = 2,403.936 \text{ ft}$
 $2,403.936 \text{ ft} \times 1.04 \text{ lbs/ft} = \mathbf{2,500.09 \text{ lbs}}$

Total weight over the mineshaft's 16 ft dia. span: **178,289.75 lbs**

2. To determine the number of W10 x 22 I-beams that are needed

Average weight per square foot: $178,289.75 \text{ lbs} / 201.06 \text{ ft}^2 = 886.749 \text{ lbs/ft}^2$

1st beam $886.749 \text{ lbs/ft}^2 \times 13.33 \text{ ft}^2 * = 11,776.027 \text{ lbs}$
 $23,000 \text{ lbs} ** / 11,776.027 \text{ lbs} = 1.953 \text{ (factor of safety)}$

* Area over which load will be borne by the subject I-Beam. This figure = L x W, where L is the span length of the I-Beam over the mineshaft and W is the width of I-Beam flange plus half of the distance to the adjacent I-Beams on both sides. In the case of I-Beam #1, L is 16' and W is 0.5' (flange width 6") + 0.1667' (half distance to adjacent I-Beam 2") x 2 (both sides) = 0.833' (10"), that is L x W = 16' x 0.833' = 13.33 ft². Table 2 lists the L values for I-Beams at different locations.

** Allowable Uniform Load for an I-Beam W10 x 22 over a specific span distance. Refer to attached table from *Manual of Steel Construction – Allowable Stress Design*.

2nd beam $886.749 \text{ lbs/ft}^2 \times 13.208 \text{ ft}^2 = 11,712.181 \text{ lbs}$

$$23,000 \text{ lbs} / 11,712.181 \text{ lbs} = 1.964 \text{ (factor of safety)}$$

3rd beam $886.749 \text{ lbs/ft}^2 \times 12.99 \text{ ft}^2 = 11,518.870 \text{ lbs}$
 $23,000 \text{ lbs} / 11,518.870 \text{ lbs} = 1.997 \text{ (factor of safety)}$

4th beam $886.749 \text{ lbs/ft}^2 \times 15.204 \text{ ft}^2 = 13,482.132 \text{ lbs}$
 $23,000 \text{ lbs} / 13,482.132 \text{ lbs} = 1.706 \text{ (factor of safety)}$

5th beam $886.749 \text{ lbs/ft}^2 \times 16.605 \text{ ft}^2 = 14,724.467 \text{ lbs}$
 $26,000 \text{ lbs} / 14,724.467 \text{ lbs} = 1.766 \text{ (factor of safety)}$

6th beam $886.749 \text{ lbs/ft}^2 \times 16.998 \text{ ft}^2 = 15,072.960 \text{ lbs}$
 $28,000 \text{ lbs} / 15,072.960 \text{ lbs} = 1.858 \text{ (factor of safety)}$

7th beam $886.749 \text{ lbs/ft}^2 \times 14.684 \text{ ft}^2 = 13,021.022 \text{ lbs}$
 $37,000 \text{ lbs} / 13,021.022 \text{ lbs} = 2.842 \text{ (factor of safety)}$

Table 2 I-Beam Span Length Over The Mineshaft

I-Beam #	1	2	3	4	5	6	7	8
Span Length (ft)	16.00	15.913	15.651	15.204	14.229	12.752	9.789	3.299

Therefore, a total of 15 I-beams (W10 x 22) are needed to support the total of 178,289.75 lbs weight over the span with factor of safety of at least 1.70.

3. Total weight in the mineshaft

- (1) Total area in calculation $18 \text{ ft} \times 18 \text{ ft} = 324 \text{ ft}^2$
- (2) Steel Plate (5/8") $25.5 \text{ lbs/ft}^2 \times 324 \text{ ft}^2 = \mathbf{8,262 \text{ lbs}}$
- (3) Concrete Slab (3,000 psi, 2' thickness)
 $324 \text{ ft}^2 \times 2 \text{ ft} = 648 \text{ ft}^3$
 $648 \text{ ft}^3 \times 150 \text{ lbs/ft}^3 = \mathbf{97,200 \text{ lbs}}$
- (4) Dirt Fill (sand, wet, packed, 4.17' thickness)
 $324 \text{ ft}^2 \times 4.17 \text{ ft} = 1,351.08 \text{ ft}^3$
 $1,351.08 \text{ ft}^3 \times 130 \text{ lbs/ft}^3 = \mathbf{175,640 \text{ lbs}}$
- (5) Steel Sch. 40 Venting Pipe (12" dia. 25 linear feet)
 $25 \text{ ft} \times 54 \text{ lbs/ft} = \mathbf{1,350 \text{ lbs}}$

(6) Re-bars in Concrete (#5, 1,260 ft/layer)

$$1,260 \text{ ft} \times 3 = 3,780 \text{ ft}$$

$$3,780 \text{ ft} \times 1.04 \text{ lbs/ft} = \mathbf{3,931.2 \text{ lbs}}$$

(7) I-Beams (W10x30 at 18' each, total 13)

$$30 \text{ lbs/ft} \times 18 \text{ ft} \times 13 = \mathbf{7,020 \text{ lbs}}$$

Total weight: **293,403.2 lbs**

Average weight per square foot: $293,403.2 \text{ lbs} / 324 \text{ ft}^2 = \mathbf{\underline{905.565 \text{ lbs/ft}^2}}$

I-Beams on Top of Sub-Collar



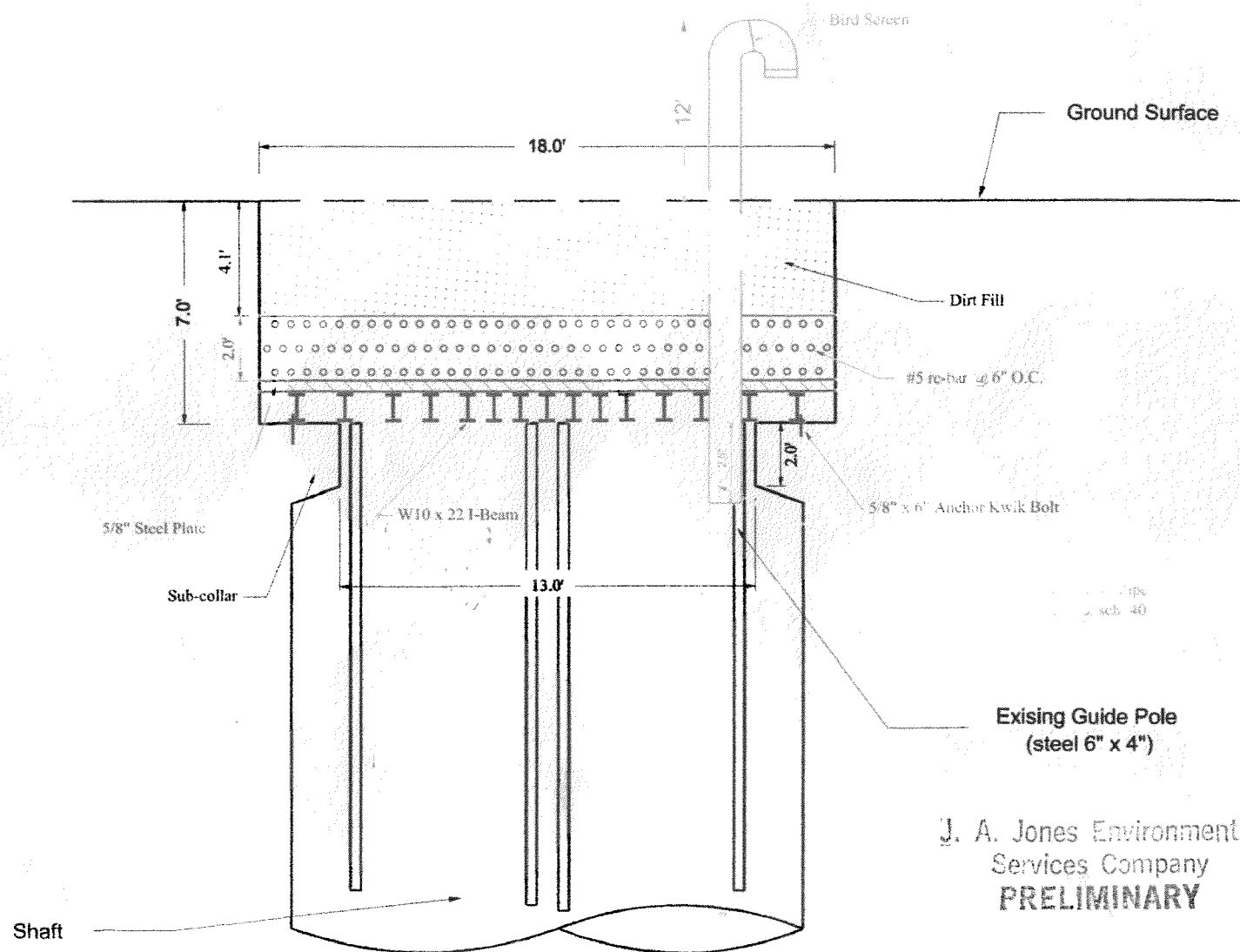
1 - 2	2 - 3	3 - 4	4 - 5	5 - 6	6 - 7	7 - 8
4 in.	4 in.	4 in.	8 in.	8 in.	12 in.	12 in.

**J. A. Jones Environmental
Services Company
PRELIMINARY**

DESIGN No. 2

I-Beams on Top of Sub-Collar (contin.)

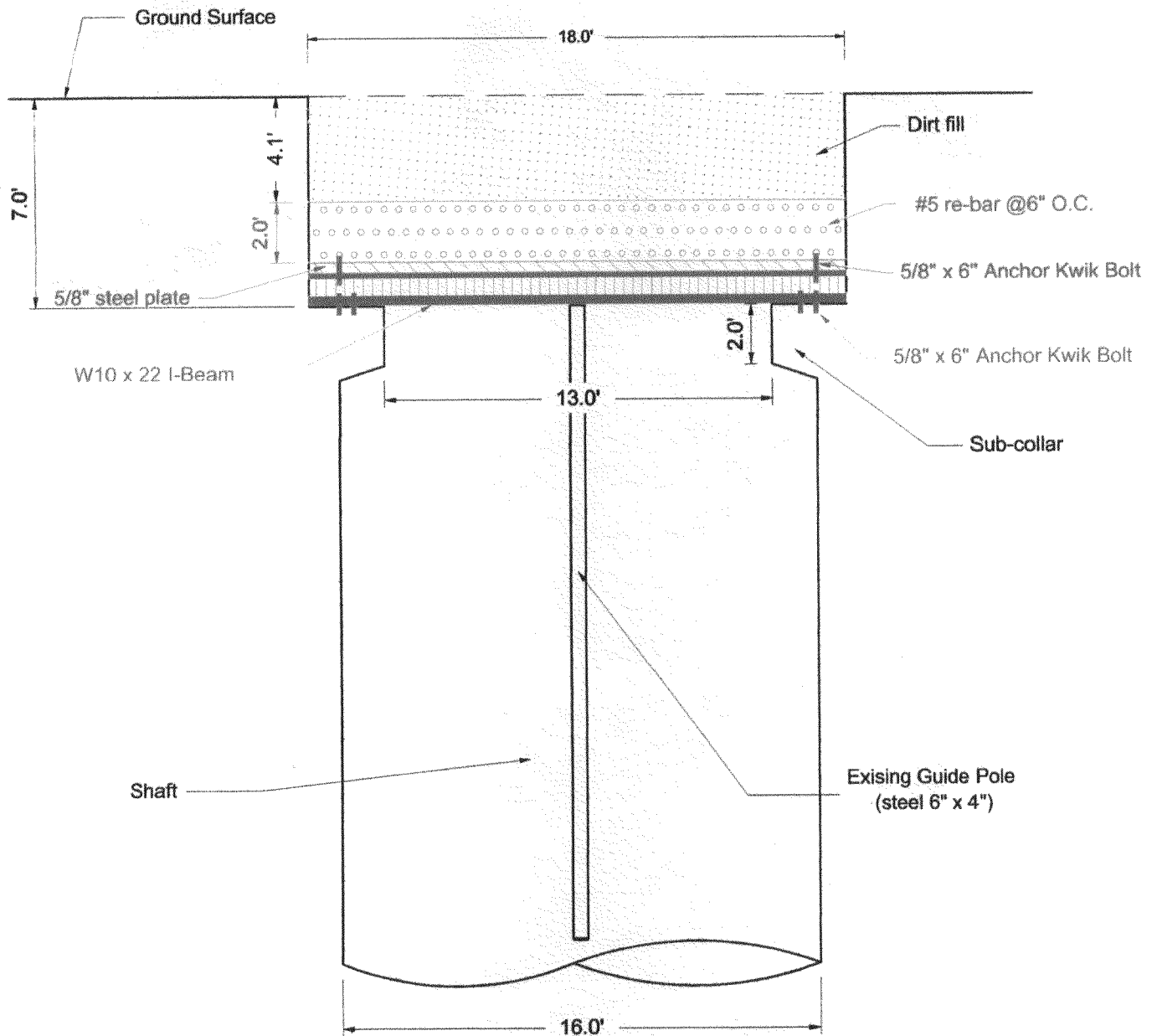
Section A - A'



DESIGN No. 2

I-Beams on Top of Sub-Collar (contin.)

Section B - B'

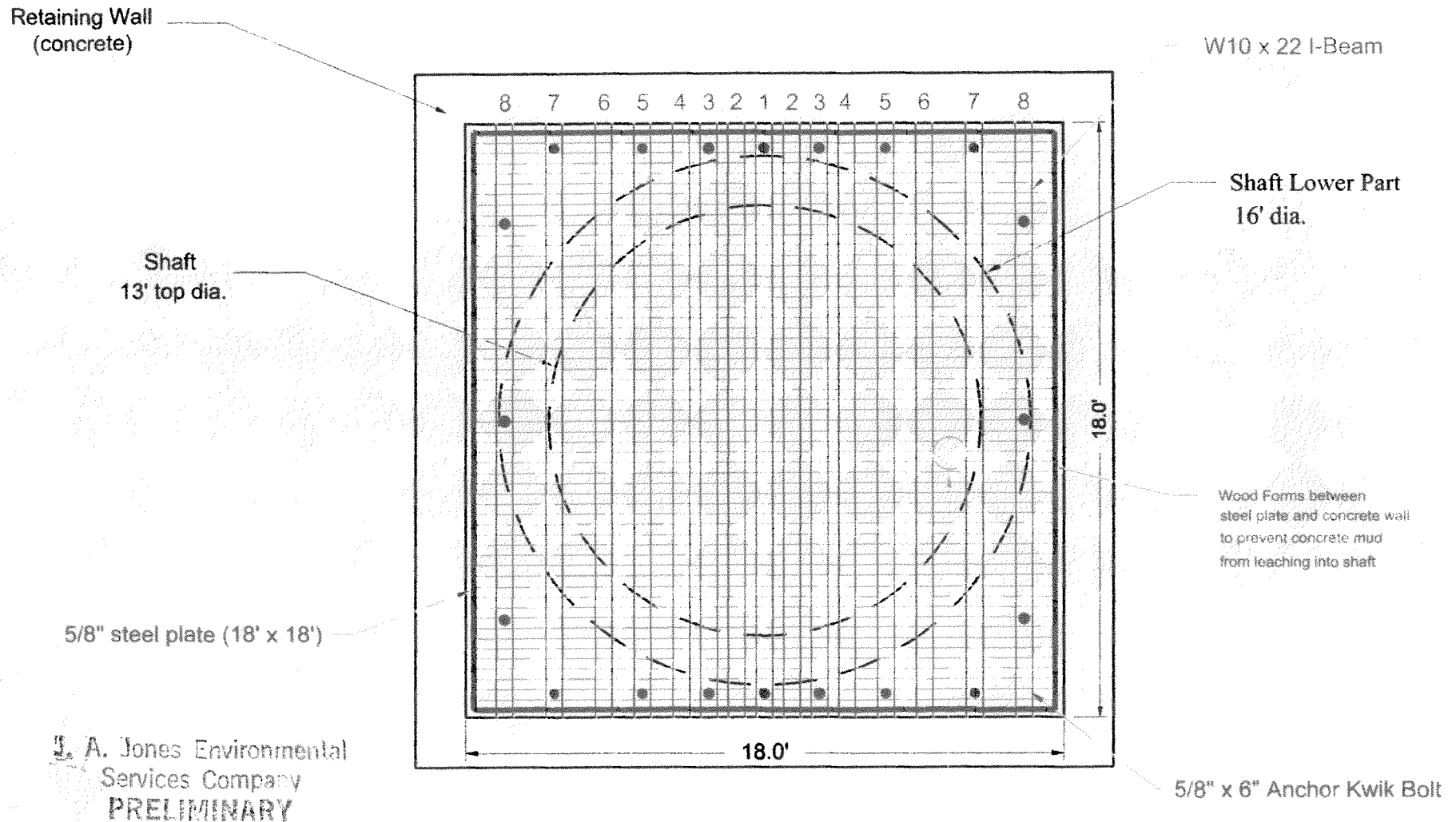


J. A. Jones Environmental
Services Company
PRELIMINARY

DESIGN No. 2

I-Beams on Top of Sub-Collar (contin.)

STEEL PLATE LAYOUT

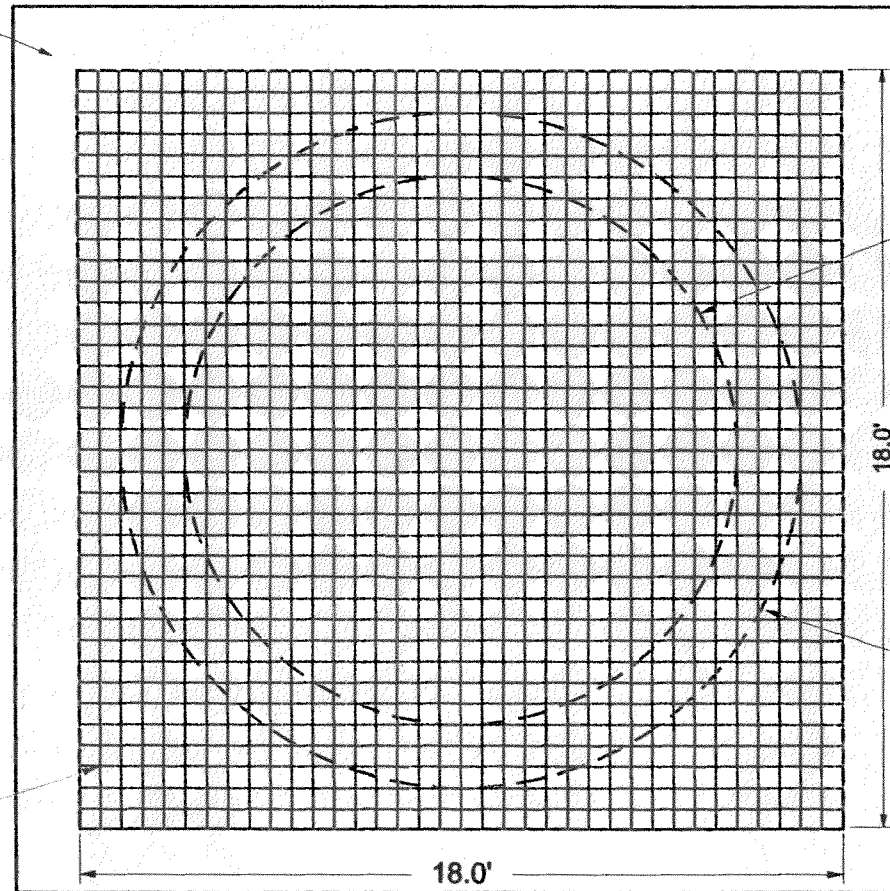


J. A. Jones Environmental
Services Company
PRELIMINARY

CONCRETE RE-BARS LAYOUT

Retaining Wall
(concrete)

5/8" re-bar @ 6" O.C.



Shaft
13' top dia.

Shaft lower part
16' dia.

Manual of

STEEL CONSTRUCTION

Allowable Stress Design


NINTH EDITION

American Institute of Steel Construction, Inc.

1 East Wacker Drive, Suite 3100

Chicago, Illinois 60601



$F_y = 36 \text{ ksi}$				BEAMS				W 10				
				W Shapes								
				Allowable uniform loads in kips								
				for beams laterally supported								
				For beams laterally unsupported, see page 2-146								
Designation		W 10			W 10			W 10				Deflection In.
Wt./ft		45	39	33	30	26	22	19	17	15	12	
Flange Width		8	8	8	5 3/4	5 3/4	5 3/4	4	4	4	4	
L_c		8.50	8.40	8.40	6.10	6.10	6.10	4.20	4.20	4.20	3.90	
L_u		22.8	19.8	16.5	13.1	11.4	9.40	7.20	6.10	5.00	4.30	
$F_y = 36 \text{ ksi}$ Span in Feet	3							74	70	66	54	.02
	4								64	55	43	.04
	5				90	77	70	60	51	44	35	.06
	6			81	86	74	61	50	43	36	29	.09
	7	102	90	79	73	63	52	43	37	31	25	.12
	8	97	83	69	64	55	46	37	32	27	22	.16
	9	86	74	62	57	49	41	33	29	24	19	.20
	10	78	67	55	51	44	37	30	26	22	17	.25
	11	71	61	50	47	40	33	27	23	20	16	.30
	12	65	56	46	43	37	31	25	21	18	14	.35
	13	60	51	43	39	34	28	23	20	17	13	.42
	14	56	48	40	37	32	26	21	18	16	12	.48
	16	49	42	35	32	28	23	19	16	14	11	.63
	18	43	37	31	29	25	20	17	14	12	10	.80
	20	39	33	28	26	22	18	15	13	11	8.6	.98
22	35	30	25	23	20	17	14	12	10	7.8	1.19	
24	32	28	23	21	18	15	12	11	9.1	7.2	1.42	
Properties and Reaction Values												For explanation of deflection, see page 2-32
S_x in. ³	49.1	42.1	35.0	32.4	27.9	23.2	18.8	16.2	13.8	10.9		
V kips	51	45	41	45	39	35	37	35	33	27		
R_1 kips	26.0	21.0	18.3	16.7	13.5	10.7	12.1	10.7	9.39	7.05		
R_2 kips/in.	8.32	7.48	6.89	7.13	6.18	5.70	5.94	5.70	5.46	4.51		
R_3 kips	33.3	26.3	21.0	23.9	17.9	14.4	16.0	13.8	11.7	7.74		
R_4 kips/in.	4.19	3.64	3.53	3.09	2.37	2.31	2.36	2.54	2.76	2.03		
R kips	48	39	33	35	26	22	24	23	21	15		
Load above heavy line is limited by maximum allowable web shear.												

W 8			BEAMS						$F_y = 36 \text{ ksi}$				
I			W Shapes										
			Allowable uniform loads in kips										
			for beams laterally supported										
			For beams laterally unsupported, see page 2-146										
Designation			W 8						Deflection in.				
Wt./ft			67	58	48	40	35	31					
Flange Width			8¼	8¼	8½	8½	8	8					
L_c			8.70	8.70	8.60	8.50	8.50	8.40					
L_v			39.9	35.3	30.3	25.3	22.6	20.1					
$F_y = 36 \text{ ksi}$	Span in Feet	6	148	129		86	72	66					
		7	137	118	98	80	71	62					
		8	120	103	86	70	62	54					
		9	106	92	76	62	55	48					
		10	96	82	69	56	49	44					
		11	87	75	62	51	45	40					
		12	80	69	57	47	41	36					
		13	74	63	53	43	38	34					
		14	68	59	49	40	35	31					
		15	64	55	46	37	33	29					
		16	60	51	43	35	31	27					
		17	56	48	40	33	29	26					
		18	53	46	38	31	27	24					
		19	50	43	36	30	26	23					
		20	48	41	34	28	25	22					
		Properties and Reaction Values											
		$S_x \text{ in}^3$	60.4	52.0	43.3	35.5	31.2	27.5		For explanation of deflection, see page 2-32			
		V kips	74	64	49	43	36	33					
		R_1 kips	48.7	39.8	28.2	22.7	18.4	15.9					
		R_2 kips/in.	13.5	12.1	9.50	8.55	7.37	6.77					
R_3 kips	84.9	66.9	42.7	33.0	24.8	20.5							
R_4 kips/in.	13.5	11.5	6.73	6.18	4.54	4.07							
R kips	96	82	61	53	41	35							
Load above heavy line is limited by maximum allowable web shear.													
Values of R in bold face exceed maximum web shear V.													

CALCULATION FOR VENT SHAFT CAP

1. Area in calculation $(9.833 \text{ ft} / 2)^2 \times 3.1416 = 75.94 \text{ ft}^2$
2. Steel Plate (3/8", 15.30 lbs/ft²)
 $15.30 \text{ lbs/ft}^2 \times 75.94 \text{ ft}^2 = \mathbf{1,161.88 \text{ lbs}}$
3. Concrete Slab (3,000 psi, 2' thickness, 150 lbs/ft³)
 $75.94 \text{ ft}^2 \times 2 \text{ ft} = 151.88 \text{ ft}^3$
 $150 \text{ lbs/ft}^3 \times 151.88 \text{ ft}^3 = \mathbf{22,782 \text{ lbs}}$
4. Steel sch. 40 Venting Pipe (8" dia. 17 linear feet, 29 lbs/ft)
 $17 \text{ ft} \times 29 \text{ lbs/ft} = \mathbf{493 \text{ lbs}}$
5. Re-Bars in concrete slab (#5, 3 layers, 302.25 ft/layer, 1.04 lbs/ft)
 $302.25 \text{ ft} \times 3 = 906.75 \text{ ft}$
 $906.75 \text{ ft} \times 1.04 \text{ lbs/ft} = \mathbf{943.02 \text{ lbs}}$

Total: **25,379.9 lbs**

Load per square foot $25,379.9 \text{ lbs} / 75.94 \text{ ft}^2 = 334.21 \text{ lbs/ft}^2$

From the table on page 2-70 of *Manual of Steel Construction, Allowable Stress Design*, allowable load on a W10x22 I-Beam with span distance of 10 feet is 37,000 pounds. Therefore, assume that each of the two I-beams bears load on an area of

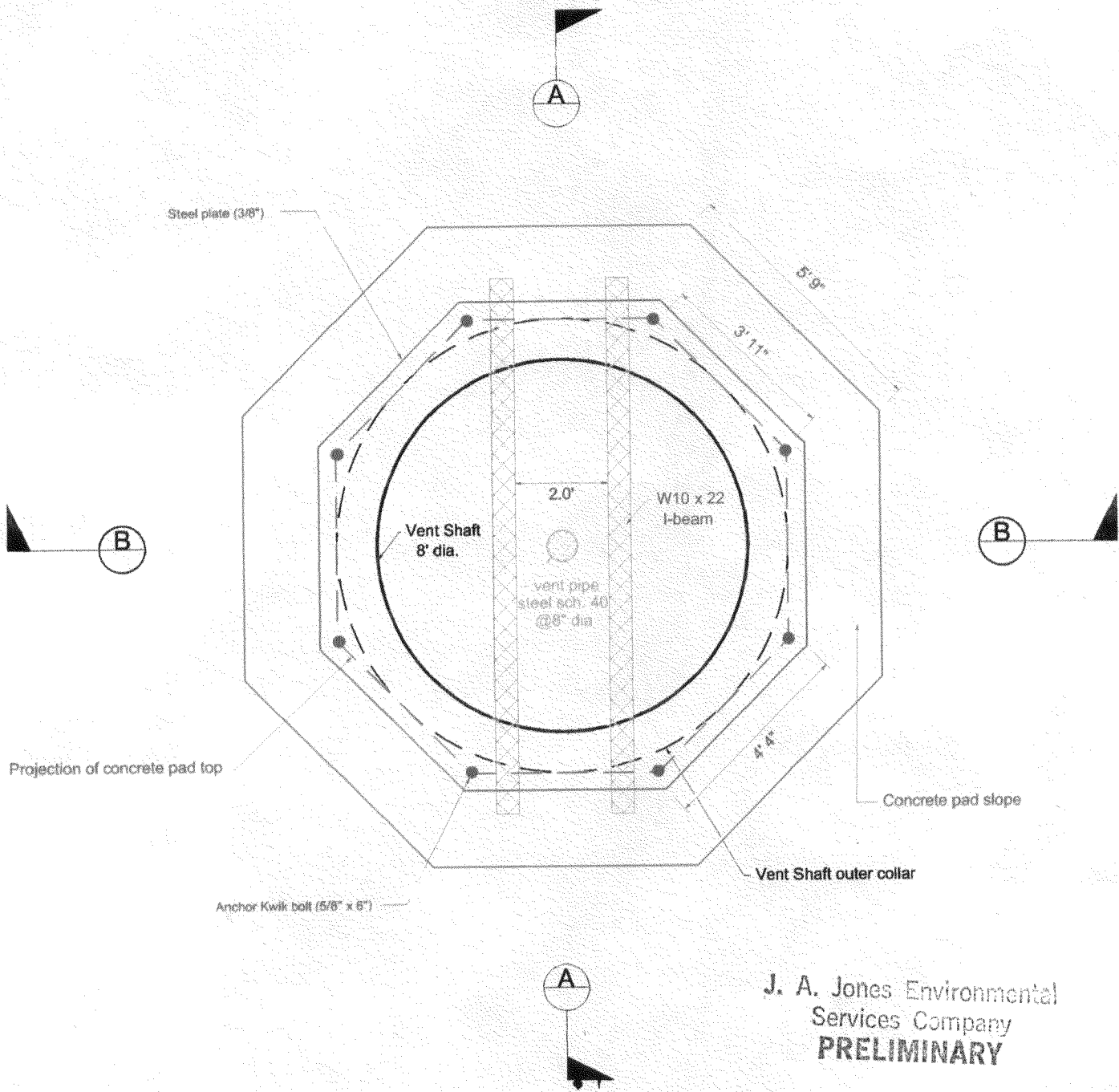
$$9.4 \text{ ft} \times 2.5 \text{ ft} = 23.5 \text{ ft}^2$$

where 9.4 ft is the I-beam span length over the vent shaft, and 2.5 ft is the sum of the width of I-beam flange plus half distance to the adjacent I-beam or shaft edge on both sides.

it comes:

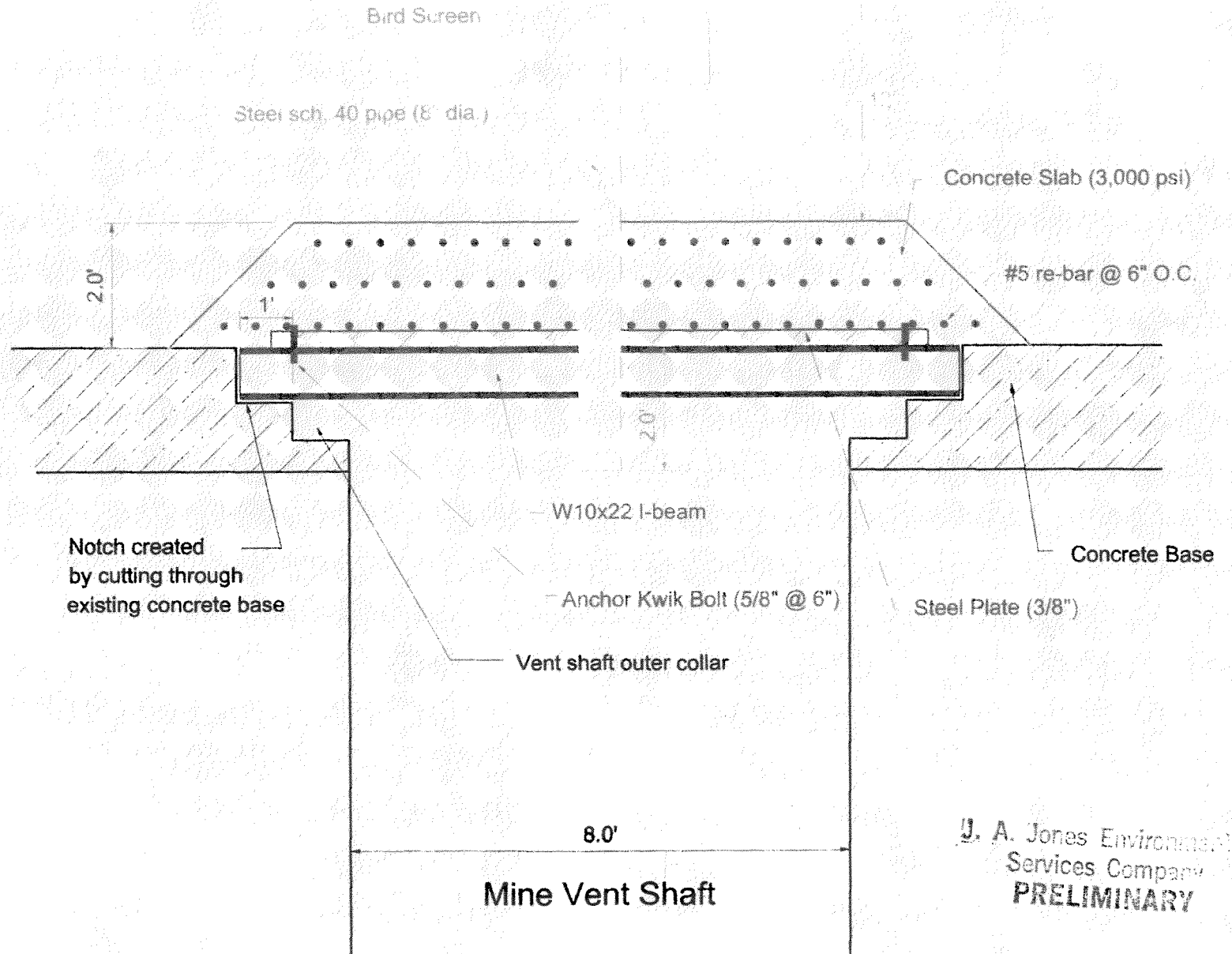
$$334.21 \text{ lbs/ft}^2 \times 23.5 \text{ ft}^2 = 7,853.94 \text{ lbs}$$
$$37,000 \text{ lbs} / 7,853.94 \text{ lbs} = 4.71 \text{ (factor of safety)}$$

DESIGN FOR VENT SHAFT CAP



DESIGN FOR VENT SHAFT CAP

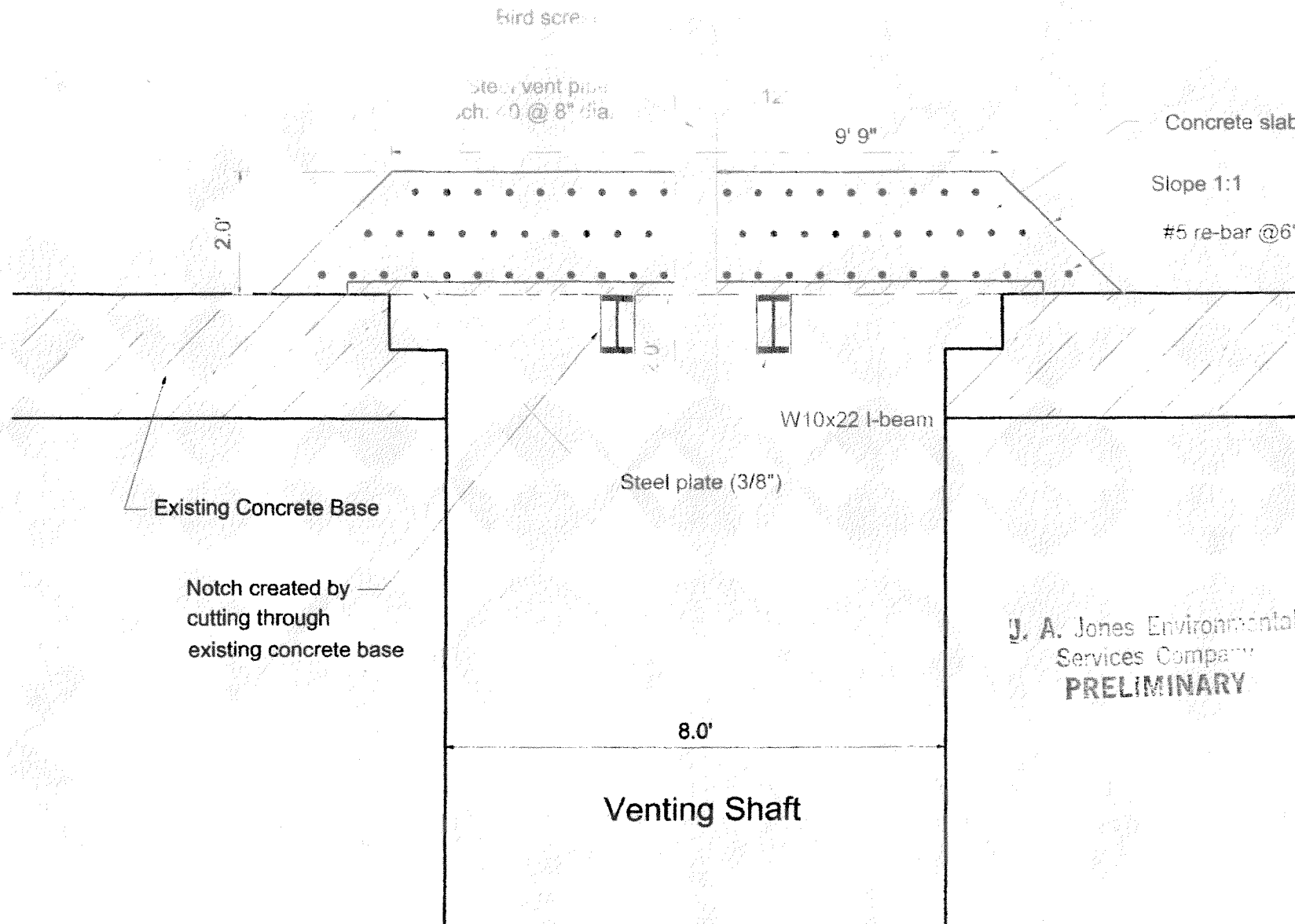
Section A - A'



J. A. Jones Environmental
Services Company
PRELIMINARY

DESIGN FOR VENT SHAFT CAP

Section B - B'

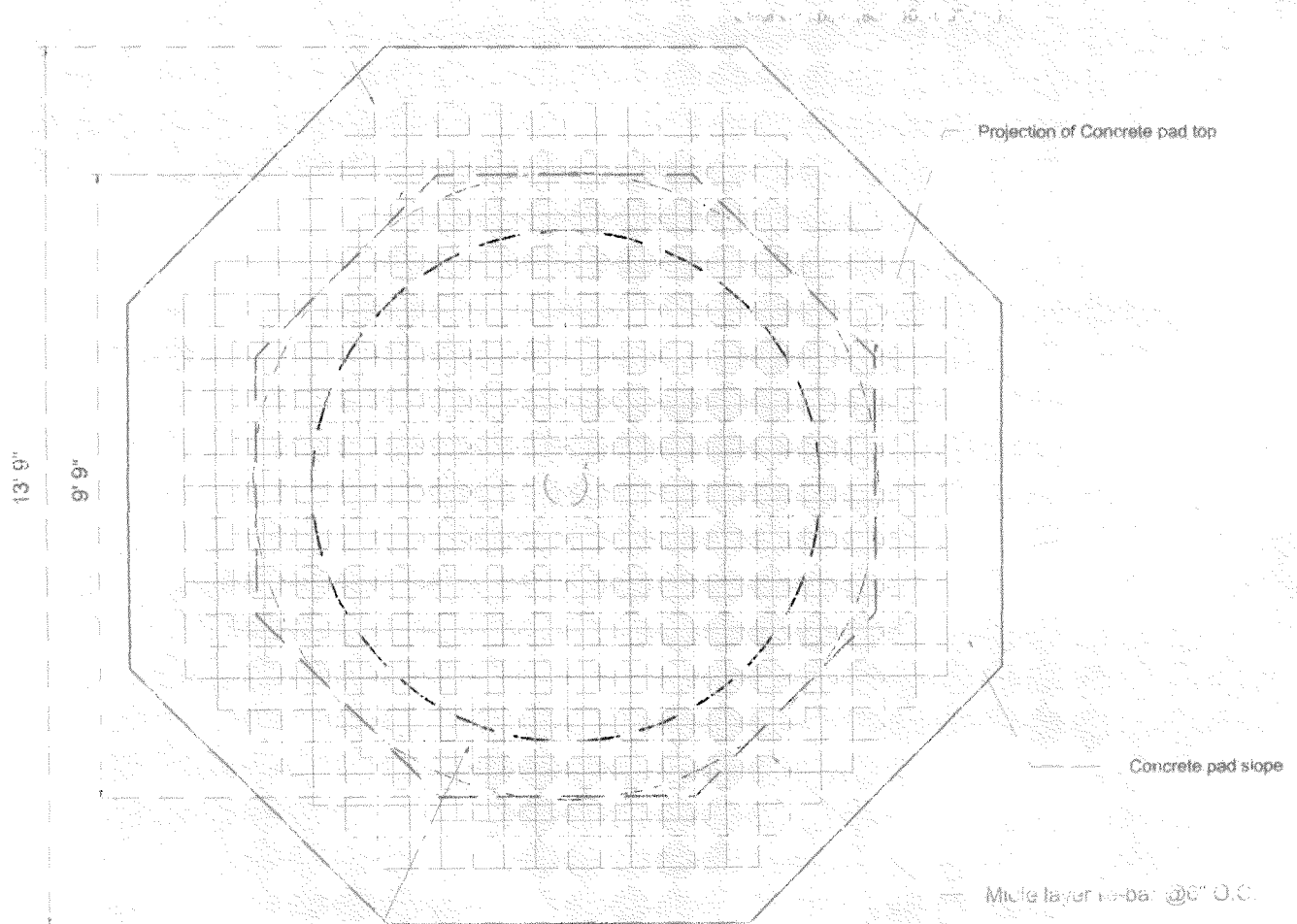


J. A. Jones Environmental
Services Company
PRELIMINARY

DESIGN FOR VENT SHAFT CAP

Concrete Re-Bar Layout

Bottom layer re-bar @6" O.C.



Top layer re-bar @6" O.C.

J. A. Jones Environmental
Services Company
PRELIMINARY

Manual of

STEEL CONSTRUCTION

Allowable Stress Design

NINTH EDITION

American Institute of Steel Construction, Inc.

1 East Wacker Drive, Suite 3100

Chicago, Illinois 60601



$F_y = 36 \text{ ksi}$

BEAMS

W 10

W Shapes

Allowable uniform loads in kips
for beams laterally supported

For beams laterally unsupported, see page 2-146



Designation	W 10			W 10			W 10				Deflection In.
Wt./ft	45	39	33	30	26	22	19	17	15	12	
Flange Width	8	8	8	5 3/4	5 3/4	5 3/4	4	4	4	4	
L_c	8.50	8.40	8.40	6.10	6.10	6.10	4.20	4.20	4.20	3.90	
L_u	22.8	19.8	16.5	13.1	11.4	9.40	7.20	6.10	5.00	4.30	
$F_y = 36 \text{ ksi}$ Span in Feet	3						74	64	55	43	.02
	4						60	51	44	35	.04
	5						50	43	36	29	.06
	6						43	37	31	25	.09
	7	102	90	81	69	64	37	32	27	22	.12
	8	97	83	79	69	64	37	32	27	22	.16
	9	86	74	62	57	49	33	29	24	19	.20
	10	78	67	55	51	44	30	26	22	17	.25
	11	71	61	50	47	40	27	23	20	16	.30
	12	65	56	46	43	37	25	21	18	14	.35
	13	60	51	43	39	34	23	20	17	13	.42
	14	56	48	40	37	32	21	18	16	12	.48
	16	49	42	35	32	28	19	16	14	11	.63
	18	43	37	31	29	25	17	14	12	10	.80
	20	39	33	28	26	22	15	13	11	8.6	.98
	22	35	30	25	23	20	14	12	10	7.8	1.19
	24	32	28	23	21	18	12	11	9.1	7.2	1.42
Properties and Reaction Values											
$S_x \text{ in.}^3$	49.1	42.1	35.0	32.4	27.9	23.2	18.8	16.2	13.8	10.9	For explanation of deflection, see page 2-32
$V \text{ kips}$	51	45	41	45	39	35	37	35	33	27	
$R_1 \text{ kips}$	26.0	21.0	18.3	16.7	13.5	10.7	12.1	10.7	9.39	7.05	
$R_2 \text{ kips/in.}$	8.32	7.48	6.89	7.13	6.18	5.70	5.94	5.70	5.46	4.51	
$R_3 \text{ kips}$	33.3	26.3	21.0	23.9	17.9	14.4	16.0	13.8	11.7	7.74	
$R_4 \text{ kips/in.}$	4.19	3.64	3.53	3.09	2.37	2.31	2.36	2.54	2.76	2.03	
$R \text{ kips}$	48	39	33	35	26	22	24	23	21	15	

Load above heavy line is limited by maximum allowable web shear.

W 8

BEAMS

 $F_y = 36 \text{ ksi}$

W Shapes

Allowable uniform loads in kips
for beams laterally supported

For beams laterally unsupported, see page 2-146



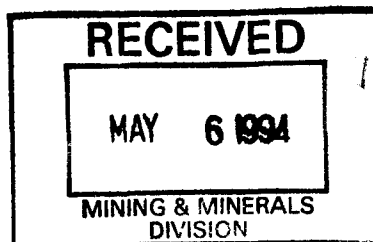
Designation	W 8						Deflection In.
Wt./ft	67	58	48	40	35	31	
Flange Width	8 1/4	8 1/4	8 1/8	8 1/8	8	8	
L_c	8.70	8.70	8.60	8.50	8.50	8.40	
L_u	39.9	35.3	30.3	25.3	22.6	20.1	
$F_y = 36 \text{ ksi}$ Span in Feet	6	148	129	86	72	66	.11
	7	137	118	80	71	62	.15
	8	120	103	86	70	62	.20
	9	106	92	76	62	55	.25
	10	96	82	69	56	49	.31
	11	87	75	62	51	45	.37
	12	80	69	57	47	41	.44
	13	74	63	53	43	38	.52
	14	68	59	49	40	35	.60
	15	64	55	46	37	33	.69
	16	60	51	43	35	31	.79
	17	56	48	40	33	29	.89
	18	53	46	38	31	27	1.00
	19	50	43	36	30	26	1.11
	20	48	41	34	28	25	1.23
Properties and Reaction Values							
$S_x \text{ in.}^3$	60.4	52.0	43.3	35.5	31.2	27.5	For explanation of deflection, see page 2-32
$V \text{ kips}$	74	64	49	43	36	33	
$R_1 \text{ kips}$	48.7	39.8	28.2	22.7	18.4	15.9	
$R_2 \text{ kips/in.}$	13.5	12.1	9.50	8.55	7.37	6.77	
$R_3 \text{ kips}$	84.9	66.9	42.7	33.0	24.8	20.5	
$R_4 \text{ kips/in.}$	13.5	11.5	6.73	6.18	4.54	4.07	
$R \text{ kips}$	96	82	61	53	41	35	

Load above heavy line is limited by maximum allowable web shear.
Values of R in bold face exceed maximum web shear V .

211

MARQUEZ DEVELOPMENT CORPORATION
P.O. Box 13958
ALBUQUERQUE, NEW MEXICO 87192

April 27, 1994



Ms. Kay Hatton
Mine Program Manager
State of New Mexico
Mining and Minerals Division
P.O. Box 6429
Santa Fe, New Mexico 87502-6429

Dear Ms. Hatton:

Pursuant to our conversation of 4/26/94 regarding "current maps and surveys" of the Marquez mine, please note for your file that the shaft sinking phase of the Marquez mine has never been completed and that Marquez Development Corporation has no plans of completing shaft sinking in the near future.

Considering the present status of the Marquez mine, the submittal of maps and surveys of the "workings of the mine" are not required at this time.

Should shaft sinking be completed and plans for mine development be entertained by Marquez Development Corporation, all appropriate maps and surveys will be submitted to your office in accordance with rule: EMNRD NMD 89-1.

Thank you for your assistance in this matter.

Sincerely,

K.E. McCorkle
Operations Manager



RECEIVED

MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill Smelter: MARQUEZ MINE & MARQUEZ MILL
Name of Operator: MARQUEZ DEVELOPMENT CORP. Telephone: 505-247-9008
Address: P.O. Box 13958 ALBUQUERQUE, N.M. 87192
Name of Previous Operator (if applicable): N/A
Location: County MC KINLEY 1/4-1/4 — Sec. 36 Township 13N Range 5W
Directions to Location if Unsurveyed: N/A
USGS Quadrangle Map Name: N/A
MSHA Number: 2901597

Type of Operation: (please check)

MINE: Surface ☒ Shaft ☒ Adit ☐ In Situ Leach ☐ Other ☐ (describe)
Mill ☒ Smelter ☐ Heap Leach ☐

Mineral or Commodity Produced: MINE & MILL HAVE NEVER BEEN COMPLETED - NO URANIUM ORE HAS BEEN PRODUCED FROM THE MINE NOR PROCESSED AT THE MILL

Mineral Estate Owner: Name MARQUEZ DEVELOPMENT CORP.
Address P.O. Box 13958 ALBUQUERQUE, N.M. 87192
Telephone 505-247-9008

Surface Estate Owner: Name MARQUEZ DEVELOPMENT CORP.
Address P.O. Box 13958 ALBUQUERQUE, N.M. 87192
Telephone 505-247-9008

Mineral Estate Classification: (Please check)

State ☐ Federal ☐ Indian ☐ Private ☒

I hereby swear or affirm that the information herein provided is true, complete and correct.

H.E. Mc Corale
Signature

Title: FACILITIES & SITE OPERATIONS MANAGER
Address: MARQUEZ DEVELOPMENT CORP.
P.O. Box 13958
ALBUQUERQUE, N.M. 87192

Date: 2-2-93

DO NOT WRITE IN THIS SPACE

Registration Number Assigned _____

By: _____
Signature

Title: _____
Date: _____



entire changes - note
new registr.
KH 2/14/92



MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill Smelter: MARQUEZ PLATE & MARQUEZ HILL
Name of Operator: MARQUEZ DEVELOPMENT CORP Telephone: 505-247-9008
Address: P.O. BOX 13958 ALBUQUERQUE, N.M. 87192
Name of Previous Operator (if applicable): BOKUM RESOURCES CORP.
Location: County MCKINLEY 1/4-1/4 - Sec. 36 Township 13N Range 5W
Directions to Location if Unsurveyed: N/A
USGS Quadrangle Map Name: N/A
MSHA Number: 2901597

Type of Operation: (please check)

MINE: Surface Adit Other (describe)
Shaft X In Situ Leach
Mill X Smelter Heap Leach

Mineral or Commodity Produced: MINE & MILL HAVE NEVER BEEN COMPLETED - NO URANIUM ORE HAS BEEN PRODUCED FROM THE MINE NOR PROCESSED AT THE MILL

Mineral Estate Owner: Name MARQUEZ DEVELOPMENT CORP.
Address P.O. BOX 13958 ALBUQUERQUE, N.M. 87192
Telephone 505-247-9008

Surface Estate Owner: Name MARQUEZ DEVELOPMENT CORP.
Address P.O. BOX 13958 ALBUQUERQUE, N.M. 87192
Telephone 505-247-9008

Mineral Estate Classification: (Please check)

State Federal Indian Private X

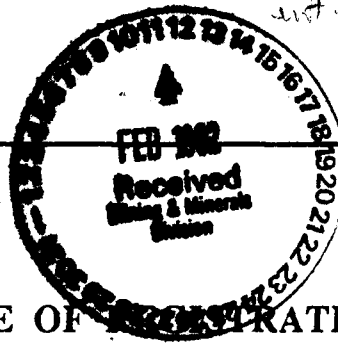
I hereby swear or affirm that the information herein provided is true, complete and correct.

H.E. McCorkle
Signature

Title: FACILITY & SITE OPERATIONS MGR.
Address: MARQUEZ DEVELOPMENT CORP
P.O. BOX 13958 ALBUQUERQUE
N.M. 87192

Date: 2-7-92

DO NOT WRITE IN THIS SPACE	
Registration Number Assigned _____	
By: _____	Signature _____
Title: _____	
Date: _____	



DO NOT WRITE IN THIS SPACE

CHANGE OF REGISTRATION

Each mine, mill and smelter operator in New Mexico shall notify the Mining and Minerals Division in writing prior to any suspension of operations, reactivation of operations, and any changes to the original information contained in Form 1, Mine/Mill/Smelter Registration. In the event of a change of ownership or operator, complete the reverse side of this form in addition to the information requested below.

Name of Operator: MARQUEZ DEVELOPMENT CORP.
Address: P.O. BOX 13958 ALBUQUERQUE, N.M. 87192
Mine Name: MARQUEZ MINE & MARQUEZ MILL MSHA Number: 2901597
Location: County McKINLEY 1/4-1/4 — Sec. 36 Township 13N Range 5W
Directions to Location if Unsurveyed: VIA
Name of Person in Charge: K.E. MC CORKLE
Title: FACILITY & SITE OPERATIONS MANAGER Telephone: 505-247-9008
Address: MARQUEZ DEVELOPMENT CORP.
P.O. BOX 13958 ALBUQUERQUE, N.M. 87192

Please describe any changes below:

A CHANGE IN OWNERSHIP AND COMPANY NAME ONLY.
NO CHANGES IN THE STATUS OF EITHER THE MINE
OR MILL SITES OR FACILITIES. SITE AND FACILITY
PERSONNEL ALSO REMAIN UNCHANGED.

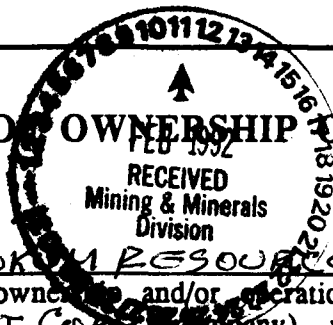
Signed by: K.E. McCorkle
Title: FACILITY & SITE OPERATIONS MANAGER
Address: P.O. BOX 13958 ALBUQUERQUE, N.M.

Date: 2-7-92
Telephone: 505-247-9008

87192



CHANGE OF OWNERSHIP OR OPERATOR



I, K.E. McCORKLE of BOKUM RESOURCES CORP. (Company) do hereby acknowledge the transfer for the purpose of ownership and/or operation of the following mine, mill, or smelter to MARQUEZ DEVELOPMENT CORP. (Company), whose principal place of business is P.O. BOX 13958 ALBUQUERQUE, N.M. 87192

Mine, Mill or Smelter Name: MARQUEZ HINE & HILL MSHA Number: 2901597

Location: County McKINLEY 1/4-1/4 — Sec. 36 Township 13N Range 5W

Directions to Location if Unsurveyed: N/A

I hereby swear or affirm that the information herein provided is true, complete and correct.

K.E. McCorkle
Signature

Title: HINE - HILL MANAGER
BOKUM RESOURCES CORP.

Address: P.O. BOX 13958, ALBUQUERQUE
N.M. 87192

Date: 11-18-91

I, K.E. McCORKLE of MARQUEZ DEVELOPMENT CORP. (Company) have read the foregoing statement and accept such transfer, also the responsibility of ownership and/or operation of said mine, mill or smelter.

I hereby swear or affirm that the information herein provided is true, complete and correct.

K.E. McCorkle
Signature

Title: FACILITY & SITE OPERATIONS MANAGER
MARQUEZ DEVELOPMENT CORP.

Address: P.O. BOX 13958 ALBUQUERQUE, N.M.
87192

Date: 11-19-91

* NOTE: A CHANGE IN OWNERSHIP AND COMPANY NAME ONLY. NO CHANGES IN THE STATUS OF EITHER THE MINE OR MILL SITES OR FACILITIES. SITE AND FACILITY PERSONNEL ALSO REMAIN UNCHANGED.



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5923
FAX No.: (505) 827-7195



DO NOT WRITE IN THIS SPACE

URANIUM MILLING OPERATIONS

An annual report is to be filed for each calendar year period from January 1 through December 31. Reports are to be received by the Mining and Minerals Division **before February 15** of the following year. Please submit a separate form for each operation. Data in this report covers calendar year 1991.

Name of Company: MARQUEZ DEVELOPMENT CORP.
Address: P.O. BOX 13958 ALBUQUERQUE, N.M. 87192
Mill Name: MARQUEZ HILL MSHA NUMBER: 2901597
Location: County SANDOVAL 1/4-1/4 _____ Sec 2431 Township 13N Range 4W
Directions to Location if Unsurveyed: _____
Name of Person in Charge: K.E. MC CORKLE
Title: FACILITY & SITE OPERATIONS MANAGER Telephone: 505-247-9008
Address: P.O. BOX 13958
ALBUQUERQUE, N.M. 87192

1. Was there a change in mill name, owner or operating company during the reporting year?

X Yes _____ No If yes, give date of change: 11/18/91
(month/ day / year)

Nature of Change: OWNERSHIP

2. If a subsidiary of another company, provide the following information:

Name of Parent Company: LONG ISLAND LIGHTING CO
Address: 175 EAST OLD COUNTRY ROAD, HICKSVILLE, N.Y. 11801

3. Type of Operation: Conventional X Insitu Leach _____

a. Insitu Leach Rated Production Capacity: Gallons/minute 0

Average Utilized Capacity: Gallons/minute 0

b. Conventional Mill Rated Capacity: Tons/day 2200

Average Utilized Capacity: Tons/day 0

c. Do you custom mill? Yes _____ No X
If yes, what quantity (Lbs.) of total recovery was custom milled? NONE

HILL DID NOT OPERATE IN 1991

4. Mine Employment Information

a. Average number of direct employees: 4

b. Number of days of operation: 260 - PREVENTIVE MAINTENANCE ONLY - HILL IS NOT OPERATING

c. Total yearly payroll: \$ 90K

d. Average number of contract employees, haulers, etc. 9 - (CONTRACT SECURITY)

5. Description and Value of Improvements Made During Year

a. Power Plant NONE

\$ 0

b. New Structure(s) NONE

\$ 0

c. Existing Structure(s) N \$ 0
d. Equipment 0 \$ 0
e. Other (specify) N \$ 0

TOTAL: \$ (0)

6. Production Recovery and Utilization

THE HARQUEZ HIRE AND MILL HAVE NEVER BEEN COMPLETED
- THUS THEY HAVE NEVER BEEN IN PRODUCTION. PREVENTIVE
MAINTENANCE ONLY IS BEING CONDUCTED AT BOTH FACILITIES

8. Voluntary Information: Voluntary responses to the following questions would be helpful to the Department. Any other additional information would be appreciated.

Delivery contracts:

- a. Domestic Utilities NONE
- b. Foreign Utilities NONE

I hereby swear or affirm that the information herein provided is true, complete and correct.

K.E. Mc Corkle
Signature

K.E. MC CORKLE
Name (please print)

Title: FACILITY & SITE OPERATIONS MANAGER

Address: P.O. Box 19958
ALBUQUERQUE, N.M. 87192

Date: 2/19/92



MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill Smelter: MARQUEZ MINE & MARQUEZ MILL
Name of Operator: BOKUM RESOURCES CORP Telephone: 505-247-9008
Address: P.O. BOX 13958 ALBUQUERQUE, N.M. 87192
Name of Previous Operator (if applicable): N/A
Location: County MCKINLEY 1/4-1/4 — Sec. 36 Township 13N Range 5W
Directions to Location if Unsurveyed: N/A
USGS Quadrangle Map Name: —
MSHA Number: 2901597

Type of Operation: (please check)

MINE: Surface — Adit — Other — (describe) —
Shaft X In Situ Leach —
Mill X Smelter — Heap Leach —

Mineral or Commodity Produced: MINE & MILL HAVE NEVER BEEN COMPLETED - NO URANIUM ORE HAS BEEN PRODUCED FROM THE MINE NOR PROCESSED AT THE MILL

Mineral Estate Owner: Name BOKUM RESOURCES CORP.
Address P.O. BOX 13958 ALBUQUERQUE, N.M. 87192
Telephone 505-247-9008

Surface Estate Owner: Name BOKUM RESOURCES CORP.
Address P.O. BOX 13958 - ALBUQUERQUE, N.M. 87192
Telephone 505-247-9008

Mineral Estate Classification: (Please check)

State — Federal — Indian — Private X

I hereby swear or affirm that the information herein provided is true, complete and correct.

H. E. McCordle
Signature

Title: MINE-MILL MANAGER
Address: BOKUM RESOURCES CORP.
P.O. BOX 13958 ALBUQUERQUE
N.M. 87192

Date: 1/23/91

DO NOT WRITE IN THIS SPACE

Registration Number Assigned —
By: —

Signature

Title: —
Date: —



MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill Smelter: MARQUEZ MINE & MARQUEZ MILL
Name of Operator: BOKUM RESOURCES CORP. Telephone: 505-247-7008
Address: P.O. BOX 13958 ALBUQUERQUE N.M. 87112
Name of Previous Operator (if applicable): N/A
Location: County HIL KINLEY 1/4-1/4 - Sec. 36 Township 13N Range 5W
Directions to Location if Unsurveyed: N/A
USGS Quadrangle Map Name: _____
MSHA Number: 2901577

Type of Operation: (please check)

MINE: Surface _____ Adit _____ Other _____ (describe)
Shaft X In Situ Leach _____
Mill X Smelter _____ Heap Leach _____

Mineral or Commodity Produced: MINES HAVE NEVER BEEN COMPLETED - NO
URANIUM OR HAS BEEN PRODUCED FROM THE MINE, OR PRODUCED AT
THE MILL

Mineral Estate Owner: Name BOKUM RESOURCES CORP.
Address P.O. BOX 13958 ALBUQUERQUE, N.M. 87112
Telephone 505-247-7008

Surface Estate Owner: Name BOKUM RESOURCES CORP.
Address P.O. BOX 13958 ALBUQUERQUE, N.M. 87112
Telephone 505-247-7008

Mineral Estate Classification: (Please check)

State _____ Federal _____ Indian _____ Private X

I hereby swear or affirm that the information
herein provided is true, complete and correct.

G.E. McCall
Signature

Title: MINE - MILL MANAGER
Address: P.O. BOX 13958
ALBUQUERQUE, N.M. 87112

Date: 1-15-90

DO NOT WRITE IN THIS SPACE

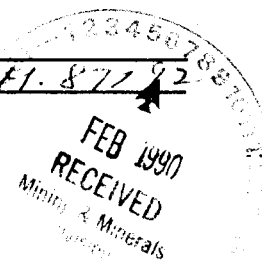
Registration Number Assigned _____

By: _____

Signature

Title: _____

Date: _____



Mt. Taylor Mine
Rio Grande Resources Corp.
USGS Quad: San Mateo



Original N150: 1/18/90
(under Chevron's ownership)

STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Copy to cp, BME, ent
Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5923
FAX No.: (505) 827-7195

FEB 15 1994

NOTICE OF INTENTION
TO SUSPEND OPERATIONS

DO NOT WRITE IN THIS SPACE

8B

Name of Company: Rio Grande Resources
Address: P.O. Box 1150 Grants, N.M. 87020
Mine or Mill Name: Mt. Taylor Mine MSHA Number: -0-
Location: County Sibola 1/4-1/4 E 1/2 Sec. 24 Township 13N Range 8W
Directions to Location if Unsurveyed: 1 mile North of
SAN Mateo

Type of Operation (please check):

Surface Mine ✓
Shaft ✓

Adit
Insitu

Mill Other
Mineral Mined or Milled

Check One: Permanent

Temporary ✓

Suspension Date Jan 1991

DESCRIPTION OF MATERIALS AND SAFEGUARDING PROCEDURES:

Mine Manager lives on site
All entries to the shafts are fenced
and welded & closed

Entire mine site is enclosed by 7' Fence

Signed by: Joe C. Lister

Name (please print) JOE C. Lister

Title: Mine Manager

Address: P.O. Box 1150

Grants, N.M. 87020

Telephone: 1282-7971

Date Signed: 2-14-94

DO NOT WRITE IN THIS SPACE

Approved [Signature]

By: [Signature]

Signature

Title: Acting Director, MMD

Date: 2/16/94



Previously submitted
1/18/90

STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

RECEIVED

FEB 5 1993

MINING & MINERALS
DIVISION

C. J. [unclear]
Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195

NOTICE OF INTENTION
TO SUSPEND OPERATIONS

DO NOT WRITE IN THIS SPACE

Name of Company: Rio Grande Resources
Address: P.O. Box 1150 Grants, N.M.
Mine or Mill Name: mt. Taylor mine MSHA Number: _____
Location: County Cibola 1/4-1/4 E 1/2 Sec. 24 Township 13 N Range 8 W
Directions to Location if Unsurveyed: 1 mile North of San Mateo
Start Up Date: N/A

Type of Operation (please check):

Surface Mine ☐ Adit ☐ Mill ☐ Other ☐
Shaft ☒ Insitu ☐ Mineral Mined or Milled ☐

Check One: Permanent ☐ Temporary ☒ Suspension Date JAN 199

DESCRIPTION OF SAFEGUARDING PROCEDURES AND MATERIALS USED: (Note: Safeguarding guidelines are available upon request from MMD).

Mine Manager lives on site
All entries to the shaft are welded closed
Entire mine site is enclosed by 7' fence

Signed by: Joe C. Lister
Name (please print): JOE C. Lister
Title: Mine Manager
Address: P.O. Box 1150 Grants, N.M. 87020
Telephone: () 287-7971
Date: 2-1-93

DO NOT WRITE IN THIS SPACE

Approved _____
By: _____
Signature _____
Title: _____
Date: _____



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

RECEIVED

FEB 5 1993

MINING & MINERALS
DIVISION

Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195

MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill/Smelter: Mt. Taylor Mine
Name of Company: Rio Grande Resources Telephone: () 287-7971
Address: P.O. Box 1150 Grants, N.M. 87020
Manager or Person in Charge and Title (please print): JOE C. Lister Mine Manager
Name of Previous Company (if applicable): _____
Location: County Cibola 1/4-1/4 E 1/2 Sec. 24 Township 13 N Range 8 W
Directions to Location if Unsurveyed: 1 mile North of SAM Mateo N.M.
USGS Quadrangle Map Name: _____
MSHA Number: _____ Start Up Date: _____

Please list all Standard Industrial Classification (SIC) codes for this operation: _____, _____

MINE TYPE: ☐ Surface ☐ Adit ☐ Heap Leach ☒ Shaft ☐ In Situ Leach

☐ MILL ☐ SMELTER ☐ Other (describe) _____

Minerals or Commodities Produced: Uranium

Minerals or Commodities Processed: - O -

Status: ☐ Active ☐ Intermittent ☒ Inactive ☐ Under Development

Capacity: (indicate cu.yds. or tons, and per day, month or year) _____

Mineral Estate Owner: Name: Rio Grande Resources

Address: SAME

Telephone: () SAME

Surface Estate Owner: Name: Rio Grande Resources

Address: SAME

Telephone: () SAME

Mineral Estate Classification: (Please check)

☐ State ☐ Federal
☐ Indian ☒ Private

I hereby swear or affirm that the information
herein provided is true, complete and correct,
and that all information on this form may be
released.

Signature

Name (please print)

Title: Mine Manager

Address: P.O. Box 1150

Grants, N.M. 87020

Date: 2-1-93



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5923
FAX No.: (505) 827-7195



URANIUM MINING OPERATIONS

DO NOT WRITE IN THIS SPACE

An annual report is to be filed for each calendar year period from January 1 through December 31. Reports are to be received by the Mining and Minerals Division before February 15 of the following year. Please submit a separate form for each operation. Data in this report covers calendar year 1991.

Name of Company: Rio Grande Resources Company
Address: P.O. Box 1150
Mine Name: Mt. Taylor Mine MSHA Number: _____
Location: County Cibola 1/4-1/4 Sec. 24 Township 13N Range 8W
Directions to Location if Unsurveyed: _____
Name of Person in Charge: I.C. Lister
Title: Mine Manager Telephone: 505-287-7971
Address: P.O. Box 1150
Grants, NM 87020

1. Was there a change in mine name, owner or operating company during the reporting year?
X Yes _____ No _____ If yes, give date of change: 08 / 01 / 91
(month / day / year)

Nature of Change: Ownership

2. If a subsidiary of another company, provide the following information:

Name of Parent Company: General Atomics
Address: P.O. Box 85608, San Diego, CA 92186-9784

3. Type of Operation: Underground Conventional X Insitu Leach _____
Underground Water Recovery _____ Surface Mine _____
Other _____

4. Mine Employment Information

a. Average number of direct employees: Underground _____ Surface 6 Other _____ Total 6
b. Number of days of operation: 365
c. Total yearly payroll: \$ _____
d. Average number of contract employees, haulers, etc. 1

5. Description and Value of Improvements Made During Year

a. Power Plant	_____	\$ <u>0</u>
b. New Structure(s)	_____	\$ <u>0</u>
c. Existing Structure(s)	_____	\$ <u>0</u>
d. Equipment	_____	\$ <u>0</u>
e. Other (specify)	_____	\$ <u>0</u>
TOTAL:		\$ <u>0</u>

6. Percent Production by Mineral Estate Classification:

Federal _____	Private _____
State _____	Indian (Reservation) _____
	Indian (Non-Reservation) _____

7. Production, Recovery and Value During year

- a. Annual Production:
- | | |
|---------------------------|-------|
| Ore mined (ST) | _____ |
| Ore milled (ST) | _____ |
| FOB mine value (\$) | _____ |
| Contained U_3O_8 (Lbs.) | _____ |
- b. End of Year Inventory:
- | | |
|---|-------|
| Ore on hand at beginning of reporting year (ST) | _____ |
| Ore on hand at close of reporting year (ST) | _____ |
- c. Depth of production (Ft): _____
- d. Annual U_3O_8 recovery: (Lbs.)
- | | |
|---------------------------------|-------|
| From ore | _____ |
| From mine water(stope leaching) | _____ |
| By insitu leach | _____ |
- e. Net recovery credited to this mine (Lbs. U_3O_8) _____
- f. Unit value of recovered U_3O_8 : (\$/Lb.) _____
- g. Total sales value: (\$/Lb.) _____
- h. Mine water production (de-watering): (GPD) _____
- i. Capacity: _____

8. End of Year Summary (Events, expansion/improvement, closures, markets, issues, suggested State action)

Suggest that State try to aid industry
in the form of tax aid and relief from High
utilities. These are some of the problems we faced and
we asked for relief. So we (N.Mex) lost a 28 m. 11. budget

9. Voluntary Information: Voluntary responses to the following issues would be helpful to the Department.

- a. Sales to domestic utilities: _____
- b. Sales to foreign utilities: _____

I hereby swear or affirm that the information herein provided is true, complete and correct.

Signature _____

Name (please print) _____

Title: Mine Manager

Address: P.O. Box 1150
Grants N.M. 87020

Date: 1-24-92



Chevron Resources Company

A Division of Chevron Industries, Inc.

P.O. Box 1150, Grants, NM 87020

Phone: (505) 287-7971

January 15, 1990

Energy, Minerals and Natural Resources Dept.
Mining and Mineral Division
Marquez Building
525 Camino de los Marquez
Santa Fe, NM 87503

Attn: Mr. Tim Leftwich

*ref: Tim / w/attach
enclosing*

Dear Sir:

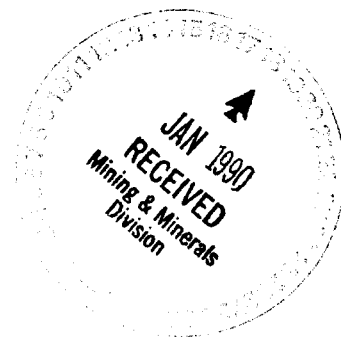
Enclosed is the map and notification forms as required under EMNRD MMD 89-1,
pertaining to placing the Mt. Taylor Mine on a standby mode for operation.

Sincerely,

J.C. Lister
Mine Manager

RDP:ejs
Enclosures

cc: Files



UPDATED:

1-13-90

DRAWN BY:

M. R. NORRIS

DATE:

5-15-89

SCALE:

1" = 100'

APPROVED BY:

R. D. POWELL

CHEVRON RESOURCES CO.

Mt. Taylor Mine

TITLE:

MONTHLY PROGRESS
JANUARY

LEVEL:

3100 & 3200

DRAWING NO.:



*Submitted 12/5/90
- found in regular file*

DO NOT WRITE IN THIS SPACE

8 B

NOTICE OF INTENTION TO SUSPEND OPERATIONS

Name of Operator: Chevron Resources Company - now Rio Grande Resources Co. *12/14/90*
Address: P.O. Box 1150 Grants, NM 87020
Mine Name: Mt. Taylor Mine MSHA Number: 29-01375

Location: County Cibola 1/4-1/4 E^{1/2} Sec. 24 Township 13N Range 8W
Directions to Location if Unsurveyed: _____

Type of Operation (please check):

Surface Mine _____ Adit _____ Other _____
Shaft X Insitu _____ Mineral Mined Uranium

Check One: Permanent _____ Temporary X

DESCRIPTION OF MATERIALS AND SAFEGUARDING PROCEDURES:

Mt. Taylor Mine was placed on standby mode on 1/15/90. All production activities were suspended on 1/12/90.

Administration and maintenance personnel will be retained to fulfill standby operating requirements.



Signed by: *J.C. Lusk*
Title: Mine Manager

Address: P.O. Box 1150
Grants, NM 87020
Telephone: (505) 287-7971

DO NOT WRITE IN THIS SPACE

Approved: _____

By: _____

Signature

Title: _____

Date: _____

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

MINING AND MINERALS DIVISION

CONFIRMATION/REPORT OF TELEPHONE CONVERSATION

TO	Name	J. C. Lieth	FROM	Name	Kay Hatton
	Office	Rio Grande Resources Co.		Office	MRGS
	Location	Grants, NM		Location	2040 S. Pacheco, Santa Fe
	Telephone Number	(505) 287-7971		Telephone Number	(505) 827-5970

Purpose of Call:

Safeguarding Update - mt. Taylor Mine

" Personnel do not b. Still have guards, locked gates; 4
I live on-site."

Explanatory Remarks:

8/3/92

Date

K. Hatton

Signature



DO NOT WRITE IN THIS SPACE

CHANGE OF REGISTRATION

Each mine, mill and smelter operator in New Mexico shall notify the Mining and Minerals Division in writing prior to any suspension of operations, reactivation of operations, and any changes to the original information contained in Form 1, Mine/Mill/Smelter Registration. In the event of a change of ownership or operator, complete the reverse side of this form in addition to the information requested below.

Name of Operator: Chevron Resources Company
Address: P.O. Box 1150 Grants, NM 87020
Mine Name: Mt. Taylor Mine MSHA Number: 29-01375
Location: County Cibola 1/4-1/4 E $\frac{1}{2}$ Sec. 24 Township 13N Range 8W
Directions to Location if Unsurveyed: _____
Name of Person in Charge: J.C. Lister
Title: Mine Manager Telephone: (505) 287-7971
Address: P.O. Box 1150
Grants, NM 87020

Please describe any changes below:

Mt. Taylor Mine ceased production on 1/12/90 and will continue on a standby mode until further notice.



Signed by: J.C. Lister
Title: Mine Manager
Address: P.O. Box 1150 Grants, NM 87020

Date: 1/15/90
Telephone: 505-287-7971



DO NOT WRITE IN THIS SPACE

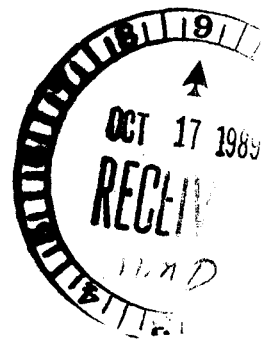
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Each mine, mill and smelter operator in New Mexico shall notify the Mining and Minerals Division in writing prior to any suspension of operations, reactivation of operations, and any changes to the original information contained in Form 1, Mine/Mill/Smelter Registration. In the event of a change of ownership or operator, complete the reverse side of this form in addition to the information requested below.

Name of Operator: Chevron Resources Company
Address: P.O. Box 1150 Grants, NM 87020
Mine Name: Mt. Taylor Mine MSHA Number: 29-01375
Location: County 1/4-1/4 Sec. Township Range
Directions to Location if Unsurveyed:
Name of Person in Charge: Joel C. Lister
Title: Mine Manager, Mt. Taylor Mine Telephone: (505) 287-7971
Address: P.O. Box 1150
Grants, NM 87020

Please describe any changes below:

Mine closure notice was given to employees as of 11/15/89 in accordance to federal law.



Signed by: *J.C. Lister*
Title: Mine Manager, Mt. Taylor Mine
Address: P.O. Box 1150 Grants, NM 87020

Date: 10/11/89
Telephone: (505) 287-7971



MINE/MILL/SMELTER REGISTRATION

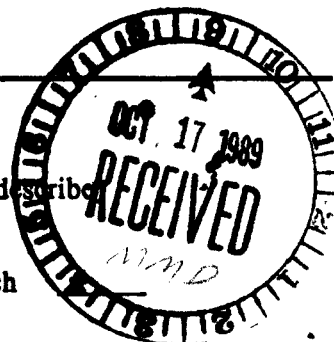
See Change of Registration
for closure notice
10-17-89

Name of Mine/Mill Smelter: Mt. Taylor Mine
Name of Operator: Chevron Resources Company Telephone: (505) 287-7971
Address: P.O. Box 1150 Grants, NM 87020
Name of Previous Operator (if applicable): _____
Location: County Cibola 1/4-1/4 E 1/2 Sec. 24 Township 13N Range 8W
Directions to Location if Unsurveyed: _____
USGS Quadrangle Map Name: San Mateo Quadrangle
MSHA Number: 29-01375

Type of Operation: (please check)

MINE: Surface _____ Adit _____ Other _____ (describe)
Shaft X In Situ Leach _____
Mill _____ Smelter _____ Heap Leach _____

Mineral or Commodity Produced: Uranium Ore for U₃O₈



Mineral Estate Owner: Name Chevron Resources Company
Address P.O. Box 1150 Grants, NM 87020
Telephone (505) 287-7971
Surface Estate Owner: Name Chevron Resources Company
Address P.O. Box 1150 Grants, NM 87020
Telephone (505) 287-7971

Mineral Estate Classification: (Please check)

State _____ Federal _____ Indian _____ Private X

I hereby swear or affirm that the information
herein provided is true, complete and correct.

J.C. Lister
Signature

Title: Mine Manager, Mt. Taylor Mine
Address: P.O. Box 1150
Grants, NM 87020

Date: 10/11/89

DO NOT WRITE IN THIS SPACE	
Registration Number Assigned _____	
By: _____	Signature _____
Title: _____	
Date: _____	

Section 10 Mine
Southwest Resources (Cobb, UNC, Homestake-Sapin, Kermac)
USGS Quad: Goat Mountain

Phone call with Susan Lucas Kamat

13 Sept 07

George Lotspeich
MSHA → Gary Williams
ABQ field office

~~West Ranch~~
~~Sec~~ ///

{ quit Cobb in
90/91
same address 50 yrs.

West Ranch Sec 32

BIA

reclamation Indian property? glothed
Jones Begay lived on it
cows got into it
would be close for production

Section 10 doesn't fit production timeframe
mid 1960s last mined by Kerr McGee
~1965

Sec 14
Buckey

did mine during period...

other people own it

BLM land & minerals

other people staked it

connected to Homestake workings ug

orig prod by Homestake

Cobb went in & rehabilitate

check Sg-65, 72 should
be Homestake
hoist / tm building

Sec 12

we def have him
includes pgsort No 2

MSHA will fine him / is planning on fining

has had
nothing to
do since 89/90

what he wants 2nd mine permit to operate
wants to go underground & do exploration
drilling

— he was Pres of Co that mined
Cobb was taken over by co. out of Houston

both 14 & 12 are dry so ~~doesn't~~ doesn't go into
new mine

minimal impact new application required

new vs. existing

ex. Mt Taylor under permit
since 1994
never be on new permit
b/c compliant under
rules

Sec 12

new minimal impact

Sec 4/Bucky

existing min impact

can fix windows, can regrade
no NEW construction

MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill Smelter: Ambrosia Lake Section 10

Name of Operator: Cobb Resources Corporation Telephone: 265-2622

Address: 313 Washington S.E. Albuquerque, NM 87108

Name of Previous Operator (if applicable): Cobb Resources Corporation

Location: County McKinley 1/4-1/4 Sec. 10 Township 14N Range 10W

Directions to Location if Unsurveyed: _____

USGS Quadrangle Map Name: _____

MSHA Number: _____

Type of Operation: (please check)

MINE: Surface _____ Adit _____ Other _____ (describe)
 Shaft XX In Situ Leach _____
 Mill _____ Smelter _____ Heap Leach _____

Mineral or Commodity Produced: U₃O₈

Mineral Estate Owner: Name Cobb Resources Corporation & BLM

Address

Telephone _____

Surface Estate Owner: **Name** Cobb Resources Corporation & BLM

Address _____

Telephone _____

Mineral Estate Classification: (Please check)

State _____ Federal XX Indian _____ Private XX

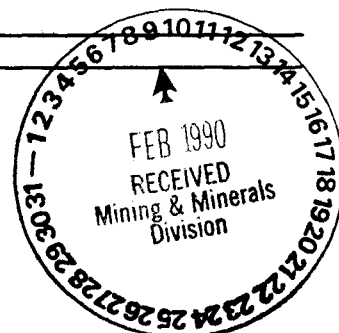
I hereby swear or affirm that the information herein provided is ~~false~~, complete and correct.

Signature George Zepayich

Title: President

Address: same as above

Date: 2/6/90



DO NOT WRITE IN THIS SPACE

Registration Number Assigned _____

By: _____

Signature

Title: _____

Date: _____

Section 12 Mine

Southwest Resources (Cobb, Koppen, Hydro-Nuclear, UNC, Dysart)

USGS Quad: Ambrosia Lake

phone call with Susan Lucas Kama

13 Sep 70

George Lotspeich

MSHA → Gary Williams
ABQ field office

~~West Ranch~~
~~Sec~~ ~~11~~

{ quit Cobb in
90/91
some address 50 yrs.

West Ranch

Sec 32

BIA

reclamation Indian property?

gotted

Jonce Begey lived on it

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would be close for production

Section 10

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~1965

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nothing to
since 89/90

Sec 14

Buckey

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other people own it

BLM land & minerals

other people staked it

connected to Homestake workings up

orig prod by Homestake

Cobb want to rehabilitate

check 58-65, 72 should
be Homestake

~~past~~ hoist / tin building

Sec 12

we def have him

includes Pgsort No 2

the MSHA will fine him / is planning on fining

what he wants 2 mine permit to operate
wants to go underground & do exploration
drilling

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Cobb was taken over by co. out of Houston

both 14 & 12 are dry so ~~doesn't~~ doesn't go into
new mine

minimal impact new application required

new vs. existing ex. mt Taylor under permit
since 1994
never be on new permit
b/c compliant under
rules

Sec 12 new minimal impact
Sec 4/Bucky existing min impact

can fix windows, can regrade
no NEW construction

Entered 8/11/07
12/21/2007

Post-It® Fax Note	7671	Date
To Susan K. Hatt	From	Geor
Co./Dept. NMMMD	Co.	Sant
Phone # 505-476-3408	Phone #	505
Fax # 505-476-3402	Fax #	505

FORM 1
MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill/Smelter: Section 12
Name of Company: Southwest Resources, Inc. Telephone: (505) 266-2500
Address: 4011 Mesa Verde NE, Albuquerque, NM 87110
Manager or Person in Charge and Title (please print): George Lotspeich CEO
Name of Previous Company (if applicable): Cobb Resources
Location: County McKinley 1/4-1/4 Sec. 5W 7 Section 12 Township 14 N
Range 10 W

Directions to Location (draw a map). Please use the back of this form. Photos and/or videos of the mine site may be filed with the registration and suspension forms if desired.

USGS Quadrangle Map Name: Ambrosia

MSHA Number: 29-02344

Start Up Date: 7/7/07

MINE TYPE: Surface Adit Shaft Heap Leach

In Situ Leach

Multiple Operator Pit (map of your area of pit must be attached)*

MILL

SMELTER OTHER (describe)

Minerals or Commodities Produced: U3O8

Minerals or Commodities Processed: _____

Status: _____ Active X Under Development _____ Temporary Suspension _____
Permanent Suspension

Do you anticipate frequent temporary suspensions and reactivations of operation? X Yes
_____ No

Capacity: (Indicate cu. yds. or tons, and per day, month or year) 200+ tons/day

*If you expand or move into a new area of the multiple operator pit, you must file a new map with MMD.

Mineral Estate Owner: Name: Southwest Resources Inc.
Address: 4011 Mesa Verde NE, Albuquerque, NM 87110
Telephone: (505) 266-2500

Surface Estate Owner: Name: Same as above
Address: _____
Telephone: () _____

Mineral Estate Classification: (Please check) State Federal Indian Private

I hereby swear or affirm that the information herein provided is true, complete and correct, and that all information on this form may be released.

George Lotspeich
Signature
George Lotspeich
Name (please print)

Title: CEO

Address: 4011 Mesa Verde NE Abq NM 87111

Date signed: 6/14/07

Abasco Lake

Sec 12 Mine
Headframe & Buildings
SW $\frac{1}{4}$ Sec 12 T14N R10W

Sign Whitehorse x

7 $\frac{1}{2}$ Miles

White Gate
with lock
you will need
a key from us
or rancher.

Kerr-McBee Mill

509

Being torn down

15 miles from
I 401

Hwy 605

Honesty Mill
Being torn down

Railroad

Grants NM

Interstate 40

exit 79

Not to scale

MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill Smelter: Ambrosia Lake Section 12

Name of Operator: Cobb Resources Corporation Telephone: 265-2622

Address: 313 Washington S.E., Albuquerque, NM 87108

Name of Previous Operator (if applicable): Cobb Resources Corporation

Location: County McKinley 1/4-1/4 Sec. 12 Township 14N Range 10W

Directions to Location if Unsurveyed: _____

USGS Quadrangle Map Name: _____

MSHA Number: _____

Type of Operation: (please check)

MINE: Surface _____ Adit _____ Other _____ (describe)
 Shaft XX In Situ Leach _____
 Mill _____ Smelter _____ Heap Leach _____

Mineral or Commodity Produced: U₃O₈

Mineral Estate Owner: Name Cobb Resources Corporation
Address same as above
Telephone

Surface Estate Owner: Name Cobb Resources Corporation
Address same as above
Telephone _____

Mineral Estate Classification: (Please check)

State _____ Federal _____ Indian _____ Private XX

I hereby swear or affirm that the information herein provided is true, complete, and correct.

Signature George Zetspach

Title: President

Address: same as above

Date: 2/6/90



DO NOT WRITE IN THIS SPACE

Registration Number Assigned _____
By: _____

Signature

Title: _____
Date: _____

Section 14 Mine
Southwest Resources (Cobb, Hydro-Nuclear , See Tee, Holly)
USGS Quad: Ambrosia Lake

phone call with Susan Lucas Kamat

13 Sept 07

George Lotspeich
MSHA → Gary Williams
ABK field office

~~West Ranch~~
~~Sec~~
~~ABK field office~~

{ quit Cobble in
90/91
some address 50 yrs.

West Ranch Sec 32

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connected to Homestake workings ug

orig prod by Homestake

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rules

Sec 12 new minimal impact
Sec 14/Bucky existing min impact

can fix windows, can regrade
no NEW construction



MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill Smelter: Ambrosia Lake Section 14

Name of Operator: Cobb Resources Corporation Telephone: 265-2622

Address: 313 Washington S.E., Albuquerque, NM 87108

Name of Previous Operator (if applicable): Cobb Resources Corporation

Location: County McKinley 1/4-1/4 Sec. 14 Township 14N Range 10W

Directions to Location if Unsurveyed: _____

USGS Quadrangle Map Name: _____

MSHA Number: _____

Type of Operation: (please check)

MINE: Surface XX Adit Other (describe)
Shaft XX In Situ Leach
Mill Smelter Heap Leach

Mineral or Commodity Produced: U₃O₈

Mineral Estate Owner: Name Cobb Resources Corporation
Address same as above
Telephone

Surface Estate Owner: Name Cobb Resources Corporation
Address same as above
Telephone

Mineral Estate Classification: (Please check)

State Federal XX Indian Private

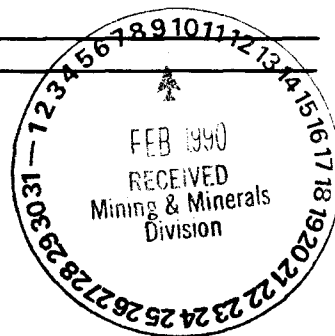
I hereby swear or affirm that the information
herein provided is true, complete and correct.

George Lopez
Signature

Title: President

Address: same as above

Date: 2/6/90



DO NOT WRITE IN THIS SPACE

Registration Number Assigned

By:

Signature

Title:

Date:



U.S. Department of Labor

Mine Safety and Health Administration

Protecting Miners' Safety and Health Since 1978

www.msha.gov



Search MSHA

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Find It! in DOL | Compliance Assistance | En Español



As Developed by PEIR

Report Selection Page

For data other than Overview, if you do not provide a Beginning date, the date of **01/01/2004** will be used.

Beginning Date:

Ending Date:

Current Mine Information

Mine ID: 2901744
Operator: Cobb Resources Corp
Opr. Begin Date: 1/1/1979
Mine Name: Section 14
Current Controller: Lotspeich George O
Controller Start Date: 3/9/1978
Mine Status: Abandoned
Status Date: 7/20/1982
Mined Material: Uranium-Vanadium Ore
Type of Mine: Underground
Location: Mckinley County, NM
Address of Record: 313 Washington Se ALBUQUERQUE, NM 87108

Operator History for Mine ID: 2901744

Operator Name	Begin Date	End Date
Cobb Resources Corp	1/1/1979	

How do I use this information? [Click Here](#)

Please select from one of the following available reports.

☒ Overview
 ☐ Inspections
 ☐ Accidents*
 ☐ Violations**
 ☐ VPID****
 ☐ Health Samples***

* Data only available from 1983 on for Accidents.

** Data only available from 1995 on for Violations and Quartz Results.

*** Data only available from October 1996 on for Metal/Nonmetal Health Samples.

Get Report

An Important Note

Please note that the information provided by the Data Retrieval System is based on data gathered from various MSHA systems. As there may be a lag time in data being entered into those systems, there will also be a lag in the reflection of that data on the DRS.

Employment/Production Reports for This Mine

Data only available from 1983 on for the Production Reports

Mine Employment and
Coal Production Totals
for This Mine

Calendar Year from (yyyy):

2004

Calendar Year to (yyyy):

2007

Quarterly Production Totals ☒

Annual Production Totals ☐



 [Return to DRS Home Page](#)

 [Back to Top](#)

www.msha.gov

www.dol.gov

[Frequently Asked Questions](#) | [Freedom of Information Act](#) | [Customer Survey](#)
[Accessibility](#) | [Privacy & Security Statement](#) | [Disclaimers](#)

Mine Safety and Health Administration (MSHA)
1100 Wilson Boulevard, 21st Floor
Arlington, VA 22209-3939

Phone: (202) 693-9400
Fax-on-demand: (202) 693-9401
Technical (web) questions: [Webmaster](#)
[Contact Us](#)

Section 17 Mine
Rio Algom (Quivira Mining, Kerr-McGee, Kermac)
USGS Quad: Ambrosia Lake



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Telephone: (505) 476-3400
FAX No.: (505) 476-3402

FORM 12: NOTICE OF INTENT
TO SUSPEND OPERATIONS

For MMD use only

Ar

Name of Company: Rio Algom Mining LLC
Address: PO Box 218, Grants, NM USA 87020
Name of Operation: Section 17 Mine MSHA Number: 2900776
Location: County McKinley 1/4-1/4 Sec. Section 17 Township T14N Range R9W
Directions to Location if Unsurveyed:

Manager or Person in Charge and Title (please print): Terry Fletcher, General Manager
Address: same as above Telephone: () 505-287-8851
Start Up Date: 1960

Photos and/or videos of the mine site may be filed with this form if desired.

TYPE OF OPERATION: ☐ Surface Mine ☐ Adit ☐ Mill ☐ Other Stope leaching
(please check all that apply) ☐ Shaft ☐ Insitu Mineral Mined or Milled uranium

Check One: ☒ Permanent ☐ Temporary Suspension Date 12/31/2002
☐ Temporary Suspension with responsible person(s) on site at all times

DESCRIPTION OF SAFEGUARDING PROCEDURES, MATERIALS AND FINAL SLOPES, AND TIMETABLE FOR
COMPLETION OF SAFEGUARDING: (Note: Safeguarding guidelines are available upon request from MMD).

All surface shafts and ventilation holes are safeguarded with metal barricades secured on openings. All electrical power sources are disconnected. Access to sites is locked and fenced.

Reclamation of the site will proceed in accordance with the approved closeout plan for the operation as described within mine permit MK009RE.

Terry Fletcher
Signature

Terry Fletcher

Name (please print)

Title: General Manager

Address: PO Box 218

Grants, NM 87020

Telephone: () 505-287-8851

Date: April 28, 2003

For MMD use only

Approved _____ Disapproved _____

By: _____
Signature

Title: _____

Date: _____

FORM 11: ANNUAL REPORT OF URANIUM MINING OPERATIONS

11
Section 19 Mine
Quivira Mining Co.

A2

An annual report is to be filed for each calendar year period from January 1 through December 31. Reports are to be received by the Mining and Minerals Division **before April 30** of the following year. **Please submit a separate form for each operation.** Data in this report covers calendar year **2002**. Forms can also be found at www.emnrd.state.nm.us/mining/map/mapforms.htm.

Name of Company: Rio Algom Mining LLC
Address: PO Box 218, Grants, NM USA 87020
Mine Name: Section 19 Miné MSHA Number: 2900776
Location: County McKinley 1/4-1/4 Sec. _____ Section 19 Township T14N Range R9W
Directions to Location if Unsurveyed: _____
Manager or Person in Charge and Title (please print): Terry Fletcher, General Manager
Address: same as above Telephone: () _____
Start Up Date: 1975

1. Was there a change in mine name, owner or operating company during the reporting year?
☒ Yes ☐ No If yes, give date of change: 2 / 12 / 02
(month / day / year)
- Nature of Change: Became a limited liability corporation
2. If a subsidiary of a larger company, provide the following information:
Name of Parent Company: Rio Algom Mining LLC
Address: 6305 Waterford Blvd, Ste. 325, Oklahoma City, OK 73118
Telephone: ()
3. Type of Operation: ☐ Underground Conventional ☐ Insitu Leach
☒ Underground Water Recovery ☐ Surface Mine
☐ Other
4. Mine Employment Information
a. Average number of direct employees: Underground Surface 3 Other Total direct 3 (all mine)
b. Total number of days of operation:
c. Total yearly payroll: \$ 100,000
d. Full time employees in **reclamation** (include in Total direct) 3
e. Average number of **contract** employees, haulers, etc. (do not include in total direct):
5. Description and Value of Improvements Made During Year
- a. Power Plant: \$
- b. New Structure(s): \$
- c. Existing Structure(s): \$
- d. Equipment: \$
- e. Other (specify): \$
- TOTAL: \$ 0



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195

RECEIVED

OCT 09 1996

NOTICE OF INTENTION
TO SUSPEND OPERATIONS

MINING & MINERALS DIV. For MMD use only

8B

Name of Company: Quivira Mining Co.
Address: PO Box 218 Grants NM 87020
Mine or Mill Name: Section 17 MSHA Number: 2900776
Location: County Mekinley 1/4-1/4 Sec. NW 2 SW Section Township: 14N Range 9W
Directions to Location if Unsurveyed:

Photos and/or videos of the mine site may be filed with this form if desired.

Start Up Date: 1960

Type of Operation (please check):

Surface Mine Adit Mill Other
Shaft X Insitu Mineral Mined or Milled Uranium

Check One: Permanent Temporary X Suspension Date 9/21/93
Temporary Suspension with responsible person(s) on site at all times

DESCRIPTION OF SAFEGUARDING PROCEDURES, MATERIALS AND FINAL SLOPES, AND TIMETABLE FOR
COMPLETION OF SAFEGUARDING: (Note: Safeguarding guidelines are available upon request from MMD).

Shaft is covered with 1/2" steel plate welded in place. Mine site is fenced with barded wire fence. Vent holes are covered with steel plate or expanded metal welded or bolted in place. (Prior recalculation of the site is complete.) * Refers to the Mining Act. This approval does not reflect approval of requirements under the Mining Act. Security provided 24 hr. at Mill site and general office location.

Terry L Fletcher
Signature

Terry L Fletcher
Name (please print)

Title: General Manager

Address: PO Box 218 Grants NM 87020

Telephone: 505 287 8851

Date signed: 10/7/96

For MMD use only

Approved X Disapproved

By: [Signature] *

Title: Division Director

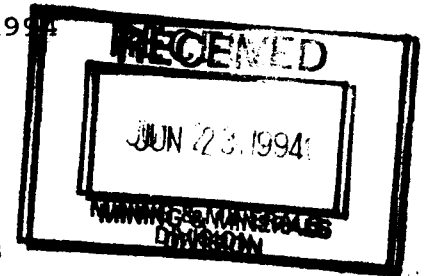
Date: 10/21/96

SECTION 17

QUIVIRA MINING COMPANY

POST OFFICE BOX 218 • GRANTS, NEW MEXICO 87020

June 21, 1994



Certified Mail
Return Receipt Requested P 762 964 387

Ms. Kay Hatton, Mine Program Manager
Department of Energy, Minerals and Natural Resources
2040 South Pacheco Street
Santa Fe, NM 87505

Dear Ms. Hatton:

Please find enclosed 8 1/2 X 11 maps depicting the final survey of the underground workings for Quivira Mining Company's mines (Sections 22, 24, 30W, 30, 19, 17, 33, 35 and 36). These maps indicate the present extent of the underground workings.

I have also attached a June 9, 1993, letter from Mr. Art Gebeau to Energy, Minerals and Natural Resources clarifying our position regarding Church Rock I and Church Rock IE as these mines are not owned by Quivira Mining, but rather by Kerr McGee Corporation. Prior to January 1989, Quivira (and its properties at Ambrosia Lake) was a wholly owned subsidiary of Kerr McGee Corporation. In January 1989, Quivira and its Ambrosia Lake properties were purchased from Kerr McGee by Rio Algom Mining Corp. The Church Rock mine I and IE properties were not included in the sale and remained with Kerr McGee. January 1989 to July 1992 Quivira did reclamation work on the Church Rock mines as a contractor on behalf of Kerr McGee, its owner. Commencing in July 1992, Kerr McGee resumed all responsibility for the reclamation and management of the Church Rock mines. As such, Mr. Roy Smith of Kerr McGee, has been notified of your request to provide final closure maps for the Church Rock mines.

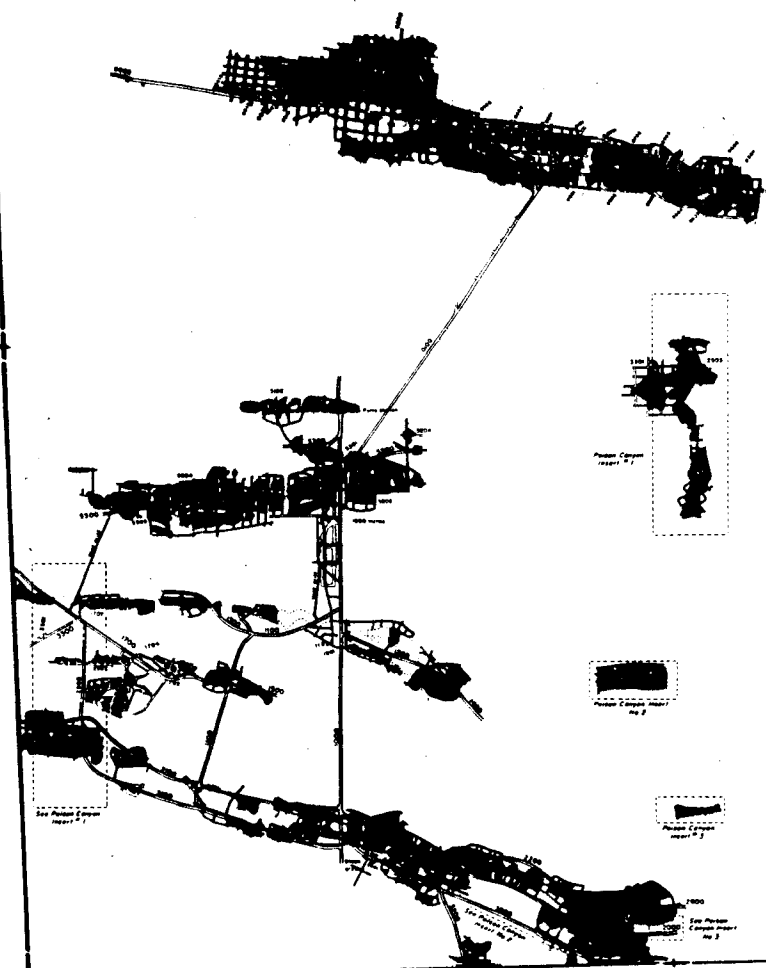
I apologize for the delay in providing this information. As I stated to you in our telephone conversation, much of our resources have been committed to participating in the Mining and Mineral Division proposals to establish hard rock mine regulations in New Mexico. If I can be of further assistance or you need additional information, please contact me at (505) 287-8851, extension 200.

Sincerely,

Terry Fletcher
General Manager

Attachments: As stated

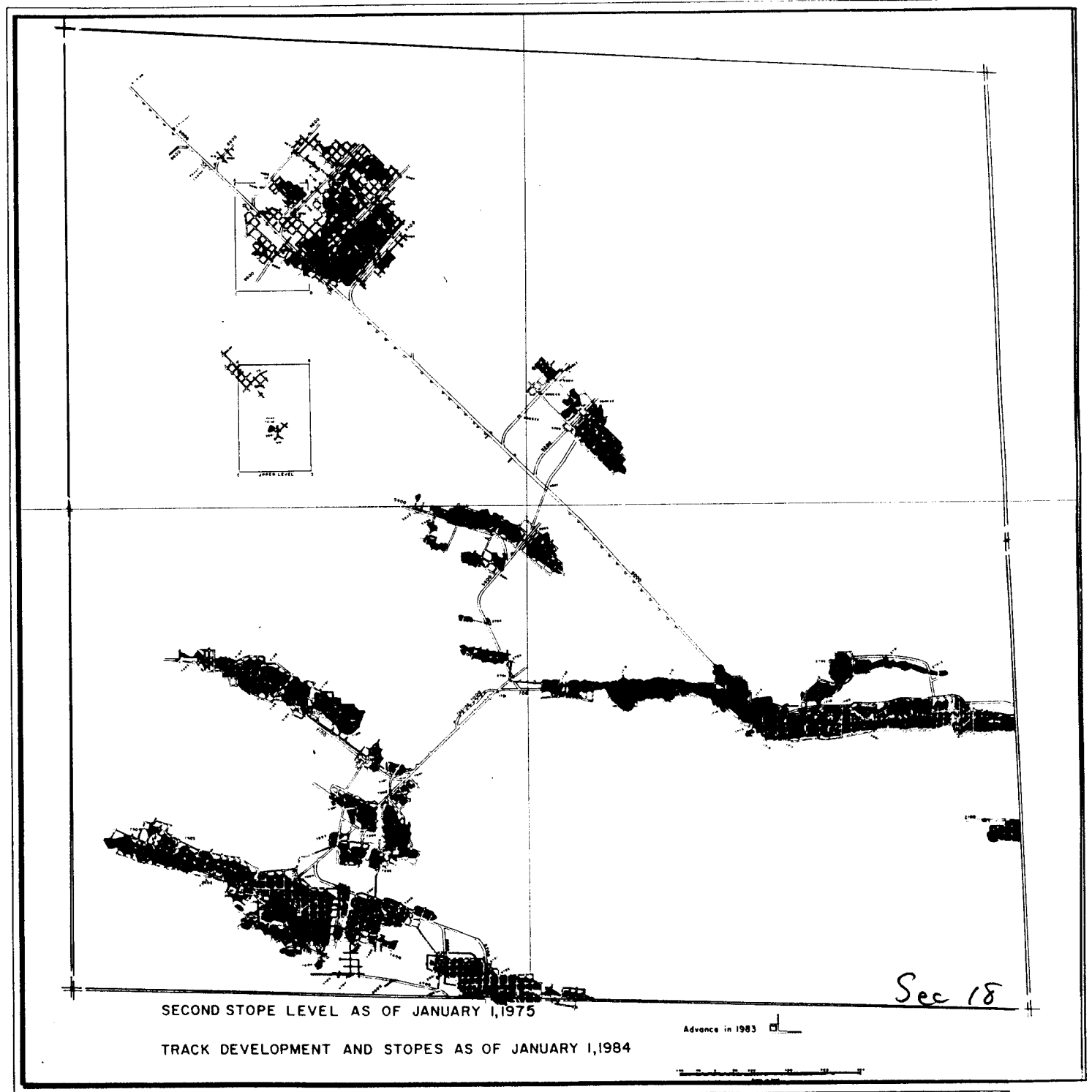
xc: B. Ferdinand (RAMC)
M. Freeman (RAMC)
P. Luthiger (Quivira)
R. Smith (Kerr McGee)
file



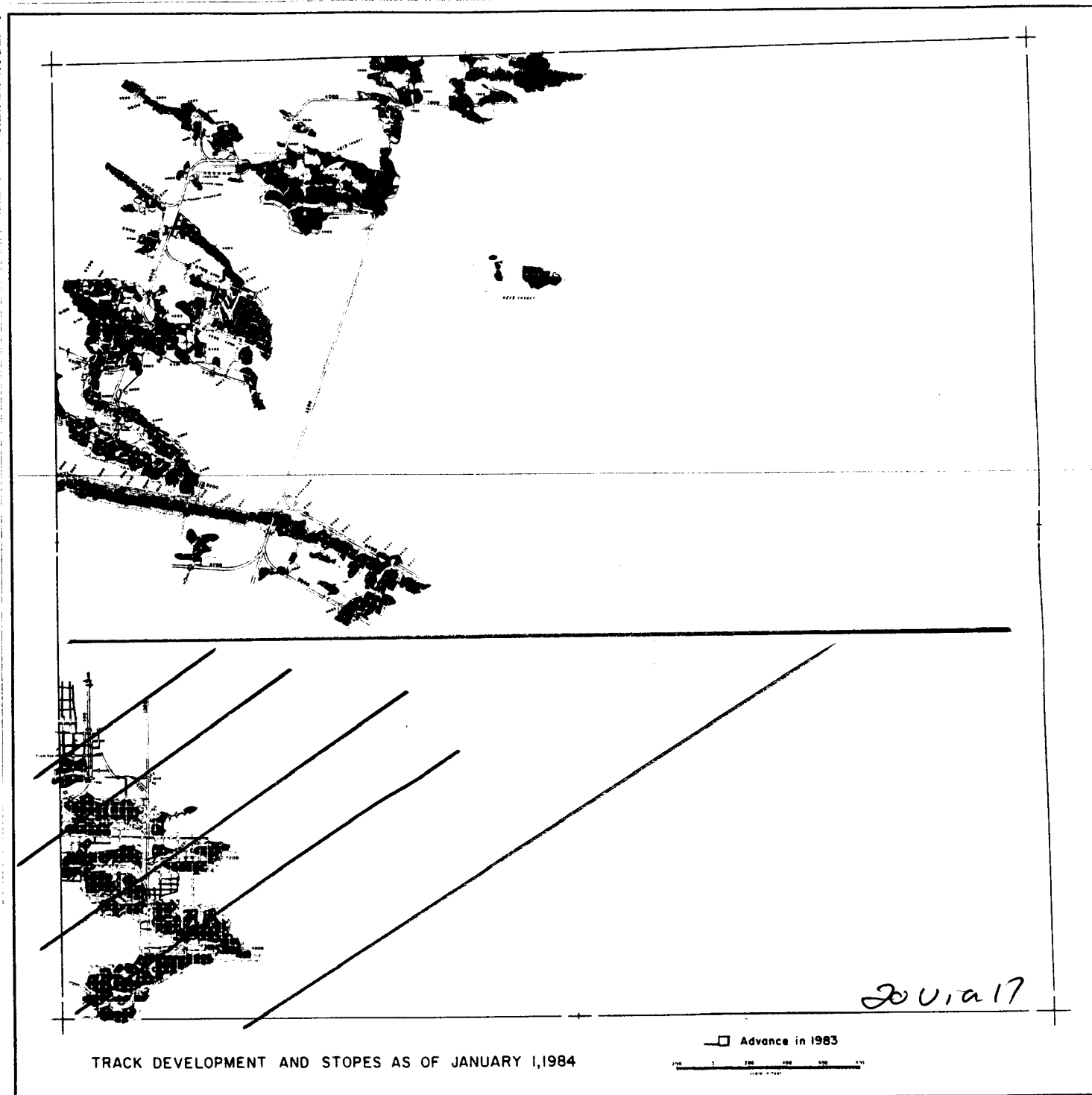
2-3 LEVEL DEVELOPMENT AS OF JANUARY 1, 1980
 TRACK DEVELOPMENT AND STOPES AS OF JANUARY 1, 1981

Advance in 1980

See 17



Section 20



ent 21/C

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
MINING AND MINERALS DIVISION
MINE REGISTRATION AND GEOLOGICAL SERVICES

SAFEGUARDING INSPECTION CHECKLIST

Mine/Company: *Sec. 17 / Q. Minera*

Company phone: *287-8851*

Date of inspection: *5/27/93*

Name of inspector: *KSH*

Others present: *Art Guehan*

Location of mine (legal description or directions to site): *SW / NW 17 / 14 N / 9 W*

Check all the following that apply:

Shaft: ☒ Adit: ☐ Pit: ☐ Quarry: ☐ Mill: ☐ Highwall(s): ☐

Pond: ☐ Other: ☐ (Describe):

Commodities produced: *Ur*

Safeguarding methods used: (describe all that apply)

Slope of pit walls or tailings: *Gentle slopes.*

Guardrails, fencing, berms or other at highwalls:

Fencing around property: (types, locks, etc.)

Warning signs:

Backfilling of shafts, adits, and auger boreholes: (how far into opening) *Shaft covered.*

Personnel on site: _____ Guards: _____

Temporary closure methods used: (if mine is temporarily suspended)

Openings sealed with steel reinforced concrete or masonry wall:

Shafts sealed with steel reinforced concrete slab or cable net closure:

Wire fence:

Barbed wire (4 strands):

Cable closure:

Heavy rope closure:

Support posts painted fluorescent color:

Other:

Beginning priority classification:

Ending priority classification (to date): *0 - still pumping intermittently. (MWR)*

Follow up action needed for operator to perform: *need NISO submitted.*

Other comments: *See photo #9*

Signature of inspector: *K. Hutton*

Title:

Agency:

Address:

Review by MMD Director: Date: _____ Initials: _____

CHECK LIST

NISO date: _____

ROS date: _____

Topo: _____

Reports: _____



ent
STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department



Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195

MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill/Smelter: Section 17 Mine
Name of Company: Quivira Mining Company Telephone: (505) 287-8851
Address: Box 218, Grants, NM 87020
Manager or Person in Charge and Title (please print): Arthur E. Gebeau, General Manager
Name of Previous Company (if applicable): _____
Location: County McKinley 1/4-1/4 NW/SW Sec. 17 Township 14N Range 9W
Directions to Location if Unsurveyed: _____
USGS Quadrangle Map Name: _____
MSHA Number: 2900541 Start Up Date: 1960

Please list all Standard Industrial Classification (SIC) codes for this operation: _____ , _____

MINE TYPE: ☐ Surface ☐ Adit ☐ Heap Leach ☒ Shaft ☐ In Situ Leach

☐ MILL ☐ SMELTER ☐ Other (describe) _____

Minerals or Commodities Produced: Uranium

Minerals or Commodities Processed: _____

Status: ☐ Active ☒ Intermittent ☐ Inactive ☐ Under Development

Capacity: (indicate cu.yds. or tons, and per day, month or year) 500 TPD at peak

Mineral Estate Owner: Name: Quivira Mining Company
Address: Box 218, Grants, NM 87020
Telephone: (505) 287-8851

Surface Estate Owner: Name: (same)
Address: (same)
Telephone: () (same)

Mineral Estate Classification: (Please check)

☐ State ☐ Federal
☐ Indian ☒ Private

I hereby swear or affirm that the information
herein provided is true, complete and correct,
and that all information on this form may be
released.

Arthur E. Gebeau
Signature
Arthur E. Gebeau
Name (please print)

Title: General Manager

Address: (as above)

Date: February 10, 1993



MINE/MILL/SMELTER REGISTRATION

Name of Mine/~~Mill~~/~~Smelter~~: Section 17 Mine

Name of Operator: Quivira Mining Company Telephone: 287-8851

Address: P.O. Box 218, Grants, New Mexico 87020

Name of Previous Operator (if applicable): _____

Location: County McKinley 1/4-1/4 SW/NW Sec. 17 Township 14N Range 9W

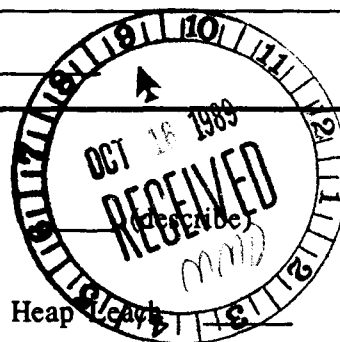
Directions to Location if Unsurveyed: _____

USGS Quadrangle Map Name: Ambrosia Lake

MSHA Number: 2900541

Type of Operation: (please check)

MINE: Surface _____ Adit _____ Other _____
Shaft X In Situ Leach _____
Mill _____ Smelter _____



Mineral or Commodity Produced: Uranium

Mineral Estate Owner: Name Quivira Mining Company
Address P.O. Box 218, Grants, NM 87020
Telephone 287-8851

Surface Estate Owner: Name Quivira Mining Company
Address P.O. Box 218, Grants, NM 87020
Telephone 287-8851

Mineral Estate Classification: (Please check)

State _____ Federal _____ Indian _____ Private X

I hereby swear or affirm that the information
herein provided is true, complete and correct.

[Signature]
Signature

Title: General Manager
Address: P.O. Box 218
Grants, NM 87020

Date: 10-10-89

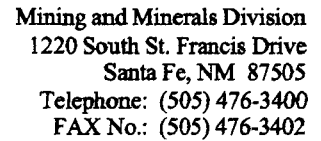
DO NOT WRITE IN THIS SPACE

Registration Number Assigned _____
By: _____

Signature

Title: _____
Date: _____

Section 19 Mine
Rio Algom (Quivira Mining, Kerr-McGee, Kermac)
USGS Quad: Ambrosia Lake



Az

Form 12 (3/01)



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Telephone: (505) 476-3400
FAX No.: (505) 476-3402

FORM 11: ANNUAL REPORT
OF
URANIUM MINING OPERATIONS

11
Section 19 Mine
Quivira Mining Co.

Ar

An annual report is to be filed for each calendar year period from January 1 through December 31. Reports are to be received by the Mining and Minerals Division **before April 30** of the following year. **Please submit a separate form for each operation.** Data in this report covers calendar year **2002**. Forms can also be found at www.emnrd.state.nm.us/mining/map/mapforms.htm.

Name of Company: Rio Algom Mining LLC
Address: PO Box 218, Grants, NM USA 87020
Mine Name: Section 19 Mine MSHA Number: 2900776
Location: County McKinley 1/4-1/4 Sec. Section 19 Township T14N Range R9W
Directions to Location if Unsurveyed: _____
Manager or Person in Charge and Title (please print): Terry Fletcher, General Manager
Address: same as above Telephone: () _____
Start Up Date: 1975

1. Was there a change in mine name, owner or operating company during the reporting year?

☒ Yes ☐ No If yes, give date of change: 2 / 12 / 02
(month / day / year)

Nature of Change: Became a limited liability corporation

2. If a subsidiary of a larger company, provide the following information:

Name of Parent Company: Rio Algom Mining LLC
Address: 6305 Waterford Blvd, Ste. 325, Oklahoma City, OK 73118
Telephone: () _____

3. Type of Operation: ☐ Underground Conventional ☐ Insitu Leach
☒ Underground Water Recovery ☐ Surface Mine
☐ Other _____

4. Mine Employment Information

a. Average number of direct employees: Underground _____ Surface 3 Other _____ Total direct 3 (all min
b. Total number of days of operation: _____
c. Total yearly payroll: \$ 100,000
d. Full time employees in **reclamation** (include in Total direct) 3
e. Average number of **contract** employees, haulers, etc. (do not include in total direct): _____

5. Description and Value of Improvements Made During Year

a. Power Plant: \$ _____
b. New Structure(s): \$ _____
c. Existing Structure(s): \$ _____
d. Equipment: \$ _____
e. Other (specify): \$ _____

TOTAL: \$ 0

6. Percent Production by Mineral Estate Classification:

Federal	_____	Private	100%
State	_____	Indian (Reservation)	_____
		Indian (Non-Reservation)	_____

7. Production, Recovery and Value During year

a. Annual Production:

8. End of Year Summary. (Events, expansion/improvement, closures, markets, issues, suggested State action)

10. Voluntary Information: Voluntary responses to the following questions would be helpful to the Department.

a. Sales to domestic utilities: N/A
b. Sales to foreign utilities: _____

I hereby swear or affirm that the information herein provided is true, complete and correct.

Signature Terry J Fletcher Date: 4/25/03

(PLEASE COMPLETE ALL OF THE FOLLOWING LEGIBLY)

Terry Fletcher

Name (please print)
General Manager

Title: _____

Address: PO Box 218

Grants, NM USA 87020



E-mail: tletcher@ramc.net

SECTION 19

out

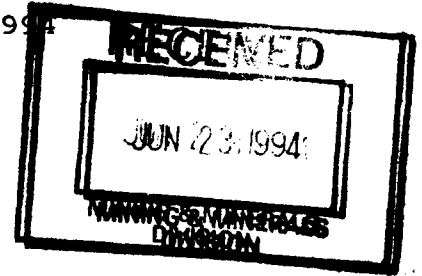
QUIVIRA MINING COMPANY

POST OFFICE BOX 218 • GRANTS, NEW MEXICO 87020

June 21, 1994

Certified Mail
Return Receipt Requested P 762 964 387

Ms. Kay Hatton, Mine Program Manager
Department of Energy, Minerals and Natural Resources
2040 South Pacheco Street
Santa Fe, NM 87505



Dear Ms. Hatton:

Please find enclosed 8 1/2 X 11 maps depicting the final survey of the underground workings for Quivira Mining Company's mines (Sections 22, 24, 30W, 30, 19, 17, 33, 35 and 36). These maps indicate the present extent of the underground workings.

I have also attached a June 9, 1993, letter from Mr. Art Gebeau to Energy, Minerals and Natural Resources clarifying our position regarding Church Rock I and Church Rock IE as these mines are not owned by Quivira Mining, but rather by Kerr McGee Corporation. Prior to January 1989, Quivira (and its properties at Ambrosia Lake) was a wholly owned subsidiary of Kerr McGee Corporation. In January 1989, Quivira and its Ambrosia Lake properties were purchased from Kerr McGee by Rio Algom Mining Corp. The Church Rock mine I and IE properties were not included in the sale and remained with Kerr McGee. January 1989 to July 1992 Quivira did reclamation work on the Church Rock mines as a contractor on behalf of Kerr McGee, its owner. Commencing in July 1992, Kerr McGee resumed all responsibility for the reclamation and management of the Church Rock mines. As such, Mr. Roy Smith of Kerr McGee, has been notified of your request to provide final closure maps for the Church Rock mines.

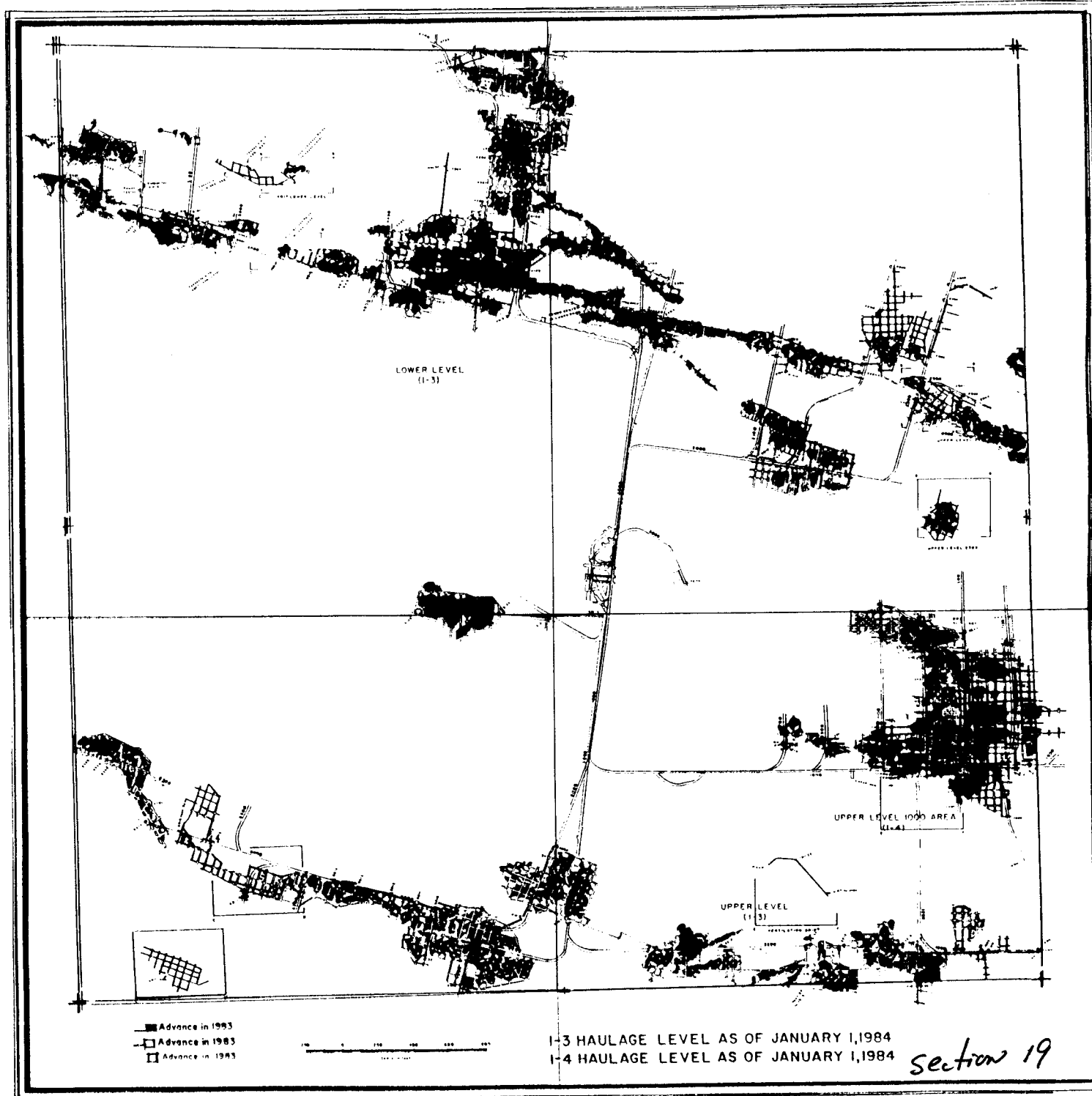
I apologize for the delay in providing this information. As I stated to you in our telephone conversation, much of our resources have been committed to participating in the Mining and Mineral Division proposals to establish hard rock mine regulations in New Mexico. If I can be of further assistance or you need additional information, please contact me at (505) 287-8851, extension 200.

Sincerely,

Terry Fletcher
General Manager

Attachments: As stated

xc: B. Ferdinand (RAMC)
M. Freeman (RAMC)
P. Luthiger (Quivira)
R. Smith (Kerr McGee)
file



ent MK

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
MINING AND MINERALS DIVISION
MINE REGISTRATION AND GEOLOGICAL SERVICES

SAFEGUARDING INSPECTION CHECKLIST

Mine/Company: *Sec. 19 / Quivira*

Company phone: *287-8851*

Date of inspection: *5/27/93*

Name of inspector: *KS H*

Others present: *Art Gubeau*

Location of mine (legal description or directions to site):

Check all the following that apply:

Shaft: ☒ Adit: ☐ Pit: ☐ Quarry: ☐ Mill: ☐ Highwall(s): ☐

Pond: ☐ Other: ☐ (Describe):

Commodities produced: *Or*

Safeguarding methods used: (describe all that apply)

Slope of pit walls or tailings:

Guardrails, fencing, berms or other at highwalls:

Fencing around property: (types, locks, etc.)

Warning signs:

Backfilling of shafts, adits, and auger boreholes: (how far into opening)

Personnel on site: _____ Guards: _____

Temporary closure methods used: (if mine is temporarily suspended)

Openings sealed with steel reinforced concrete or masonry wall:

Shafts sealed with steel reinforced concrete slab or cable net closure:

Wire fence:

Barbed wire (4 strands):

Cable closure:

Heavy rope closure:

Support posts painted fluorescent color:

Other:

Beginning priority classification:

Ending priority classification (to date): *0 - active as MWR well field*

Follow up action needed for operator to perform:

Other comments:

Signature of inspector: *R. H. H. H.*

Title:

Agency:

Address:

Review by MMD Director: Date: _____ Initials: _____

CHECK LIST

NISO date: _____

ROS date: _____

Topo: _____

Reports: _____



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195



MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill/Smelter: Section 19 Mine
Name of Company: Quivira Mining Company Telephone: (505) 287-8851
Address: Box 218, Grants, NM 87020
Manager or Person in Charge and Title (please print): Arthur E. Gebeau, General Manager
Name of Previous Company (if applicable): _____
Location: County McKinley 1/4-1/4 NW/SE Sec. 19 Township 14N Range 9W
Directions to Location if Unsurveyed: _____
USGS Quadrangle Map Name: _____
MSHA Number: 2900541 Start Up Date: 1975

Please list all Standard Industrial Classification (SIC) codes for this operation: _____ , _____
MINE TYPE: ☐ Surface ☐ Adit ☐ Heap Leach ☒ Shaft ☐ In Situ Leach
☐ MILL ☐ SMELTER ☐ Other (describe) _____
Minerals or Commodities Produced: Uranium
Minerals or Commodities Processed: _____
Status: ☐ Active ☐ Intermittent ☐ Inactive ☐ Under Development
Capacity: (indicate cu.yds. or tons, and per day, month or year) 1000 TPD at peak

Mineral Estate Owner: Name: Quivira Mining Company
Address: Box 218, Grants, NM 87020
Telephone: (505) 287-8851
Surface Estate Owner: Name: (same)
Address: (same)
Telephone: () (same)

Mineral Estate Classification: (Please check)
☐ State ☐ Federal
☐ Indian ☒ Private

I hereby swear or affirm that the information
herein provided is true, complete and correct,
and that all information on this form may be
released.

Arthur E. Gebeau
Signature
Arthur E. Gebeau
Name (please print)

Title: General Manager
Address: (as above)
Date: February 10, 1993



MINE/MILL/SMELTER REGISTRATION

Name of Mine/~~MILL~~ ~~Smelter~~: Section 19 Mine

Name of Operator: Quivira Mining Company Telephone: 287-8851

Address: P.O. Box 218, Grants, New Mexico 87020

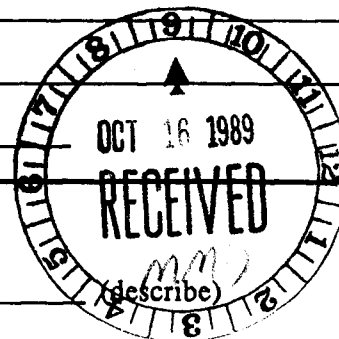
Name of Previous Operator (if applicable): _____

Location: County McKinley 1/4-1/4 SE/NW Sec. 19 Township 14N Range 9W

Directions to Location if Unsurveyed: _____

USGS Quadrangle Map Name: Ambrosia Lake

MSHA Number: 2900541



Type of Operation: (please check)

MINE: Surface _____ Adit _____ Other _____
Shaft X In Situ Leach _____
Mill _____ Smelter _____ Heap Leach _____

Mineral or Commodity Produced: Uranium

Mineral Estate Owner: Name Quivira Mining Company
Address P.O. Box 218, Grants, NM 87020
Telephone 287-8851

Surface Estate Owner: Name Quivira Mining Company
Address P.O. Box 218, Grants, NM 87020
Telephone 287-8851

Mineral Estate Classification: (Please check)

State _____ Federal _____ Indian _____ Private X

I hereby swear or affirm that the information
herein provided is true, complete and correct.

[Signature]
Signature

Title: General Manager
Address: P.O. Box 218
Grants, NM 87020

Date: 10-10-89

DO NOT WRITE IN THIS SPACE

Registration Number Assigned _____
By: _____
Signature

Title: _____
Date: _____

Section 22 Mine
Rio Algom (Quivira Mining, Kerr-McGee, Kermac)
USGS Quad: Goat Mountain



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Telephone: (505) 476-3400
FAX No.: (505) 476-3402

FORM 12: NOTICE OF INTENT
TO SUSPEND OPERATIONS

For MMD use only

AL

Name of Company: Rio Algom Mining LLC
Address: PO Box 218, Grants, NM USA 87020
Name of Operation: McKinley MSHA Number: 2900776
Location: County McKinley 1/4-1/4 Sec. Section 22 Township T14N Range R10W
Directions to Location if Unsurveyed:

Manager or Person in Charge and Title (please print): Terry Fletcher, General Manager
Address: same as above Telephone: () 505-287-8851
Start Up Date: 1960

Photos and/or videos of the mine site may be filed with this form if desired.

TYPE OF OPERATION: ☐ Surface Mine ☐ Adit ☐ Mill ☐ Other Stope leaching
(please check all that apply) ☐ Shaft ☐ Insitu Mineral Mined or Milled uranium

Check One: ☒ Permanent ☐ Temporary Suspension Date 12/31/2002
☐ Temporary Suspension with responsible person(s) on site at all times

DESCRIPTION OF SAFEGUARDING PROCEDURES, MATERIALS AND FINAL SLOPES, AND TIMETABLE FOR
COMPLETION OF SAFEGUARDING: (Note: Safeguarding guidelines are available upon request from MMD).

All surface shafts and ventilation holes are safeguarded with metal barricades secured on openings. All electrical power sources are disconnected. Access to sites is locked and fenced.

Reclamation of the site will proceed in accordance with the approved closeout plan for the operation as described within mine permit MK009RE.

Terry J Fletcher
Signature

Terry Fletcher

Name (please print)

Title: General Manager

Address: PO Box 218

Grants, NM 87020

Telephone: () 505-287-8851

Date: April 28, 2003

For MMD use only

Approved _____ Disapproved _____

By: _____
Signature

Title: _____

Date: _____



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Telephone: (505) 476-3400
FAX No.: (505) 476-3402

FORM 11: ANNUAL REPORT
OF
URANIUM MINING OPERATIONS

11
Section 22 Mine
Quivira Mining Co.

AL

An annual report is to be filed for each calendar year period from January 1 through December 31. Reports are to be received by the Mining and Minerals Division **before April 30** of the following year. **Please submit a separate form for each operation.** Data in this report covers calendar year **2002**. Forms can also be found at www.emnrd.state.nm.us/mining/map/mapforms.htm.

Name of Company: Rio Algom Mining LLC
Address: PO Box 218, Grants, NM USA 87020
Mine Name: Section 22 Mine MSHA Number: 2900776
Location: County McKinley 1/4-1/4 Sec. Section 22 Township T14N Range R10W
Directions to Location if Unsurveyed: _____
Manager or Person in Charge and Title (please print): Terry Fletcher, General Manager
Address: same as above Telephone: () _____
Start Up Date: 1960

1. Was there a change in mine name, owner or operating company during the reporting year?

☒ Yes ☐ No If yes, give date of change: 2 / 12 / 02
(month / day / year)

Nature of Change: Became a limited liability corporation

2. If a subsidiary of a larger company, provide the following information:

Name of Parent Company: Rio Algom Mining LLC

Address: 6305 Waterford Blvd., Ste. 325, Oklahoma City, OK 73118

Telephone: () _____

3. Type of Operation: ☐ Underground Conventional ☐ Insitu Leach
☒ Underground Water Recovery ☐ Surface Mine
☐ Other _____

4. Mine Employment Information

a. Average number of direct employees: Underground _____ Surface 3 Other _____ Total direct 3
b. Total number of days of operation: _____
c. Total yearly payroll: \$ 100,000
d. Full time employees in reclamation (include in Total direct) 3
e. Average number of contract employees, haulers, etc. (do not include in total direct): _____

5. Description and Value of Improvements Made During Year

a. Power Plant: \$ _____
b. New Structure(s): \$ _____
c. Existing Structure(s): \$ _____
d. Equipment: \$ _____
e. Other (specify): \$ _____

TOTAL: \$ 0

6. Percent Production by Mineral Estate Classification:

Federal	_____	Private	100%
State	_____	Indian (Reservation)	_____
		Indian (Non-Reservation)	_____

7. Production, Recovery and Value During year

a. Annual Production:

Ore mined (ST)	_____
Ore milled (ST)	_____
FOB mine value (\$)	_____
Contained U ₃ O ₈ (Lbs.)	_____

b. End of Year Inventory:

Ore on hand at beginning of reporting year (ST)	_____
Ore on hand at close of reporting year (ST)	_____

c. Depth of production (ft.): _____

d. Annual U₃O₈ recovery (Lbs.):

From ore	_____
From mine water (stope leaching)	0
From insitu leach	_____

e. Net recovery credited to this mine (Lbs. U₃O₈): _____

f. Unit value of recovered U₃O₈ (\$/Lb.): _____

g. Total sales value (\$/Lb.): _____

h. Mine water production (de-watering) (GPD): 0

i. Capacity: 0

8. Size of Operation in Acres: 640 Acreage Disturbed to Date: 35
Acreage Reclaimed to Date: 15.8

9. End of Year Summary: (Events, expansion/improvement, closures, markets, issues, suggested State action)

closed shaft and three vent holes per approved closeout plan and revegetated these areas.

10. Voluntary Information: Voluntary responses to the following questions would be helpful to the Department.

a. Sales to domestic utilities: N/A

b. Sales to foreign utilities: _____

I hereby swear or affirm that the information herein provided is true, complete and correct.

Signature: Terry J Fletcher Date: 4/25/03

(PLEASE COMPLETE ALL OF THE FOLLOWING LEGIBLY)

Terry Fletcher

Name (please print) _____

Title: General Manager

Address: PO Box 218

Grants, NM USA 87020



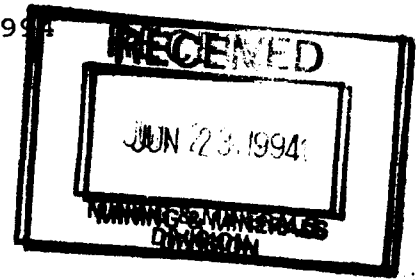
E-mail: tfletcher@ramc.net

SECTION 22

QUIVIRA MINING COMPANY

POST OFFICE BOX 218 • GRANTS, NEW MEXICO 87020

June 21, 1994



Certified Mail
Return Receipt Requested P 762 964 387

Ms. Kay Hatton, Mine Program Manager
Department of Energy, Minerals and Natural Resources
2040 South Pacheco Street
Santa Fe, NM 87505

Dear Ms. Hatton:

Please find enclosed 8 1/2 X 11 maps depicting the final survey of the underground workings for Quivira Mining Company's mines (Sections 22, 24, 30W, 30, 19, 17, 33, 35 and 36). These maps indicate the present extent of the underground workings.

I have also attached a June 9, 1993, letter from Mr. Art Gebeau to Energy, Minerals and Natural Resources clarifying our position regarding Church Rock I and Church Rock IE as these mines are not owned by Quivira Mining, but rather by Kerr McGee Corporation. Prior to January 1989, Quivira (and its properties at Ambrosia Lake) was a wholly owned subsidiary of Kerr McGee Corporation. In January 1989, Quivira and its Ambrosia Lake properties were purchased from Kerr McGee by Rio Algom Mining Corp. The Church Rock mine I and IE properties were not included in the sale and remained with Kerr McGee. January 1989 to July 1992 Quivira did reclamation work on the Church Rock mines as a contractor on behalf of Kerr McGee, its owner. Commencing in July 1992, Kerr McGee resumed all responsibility for the reclamation and management of the Church Rock mines. As such, Mr. Roy Smith of Kerr McGee, has been notified of your request to provide final closure maps for the Church Rock mines.

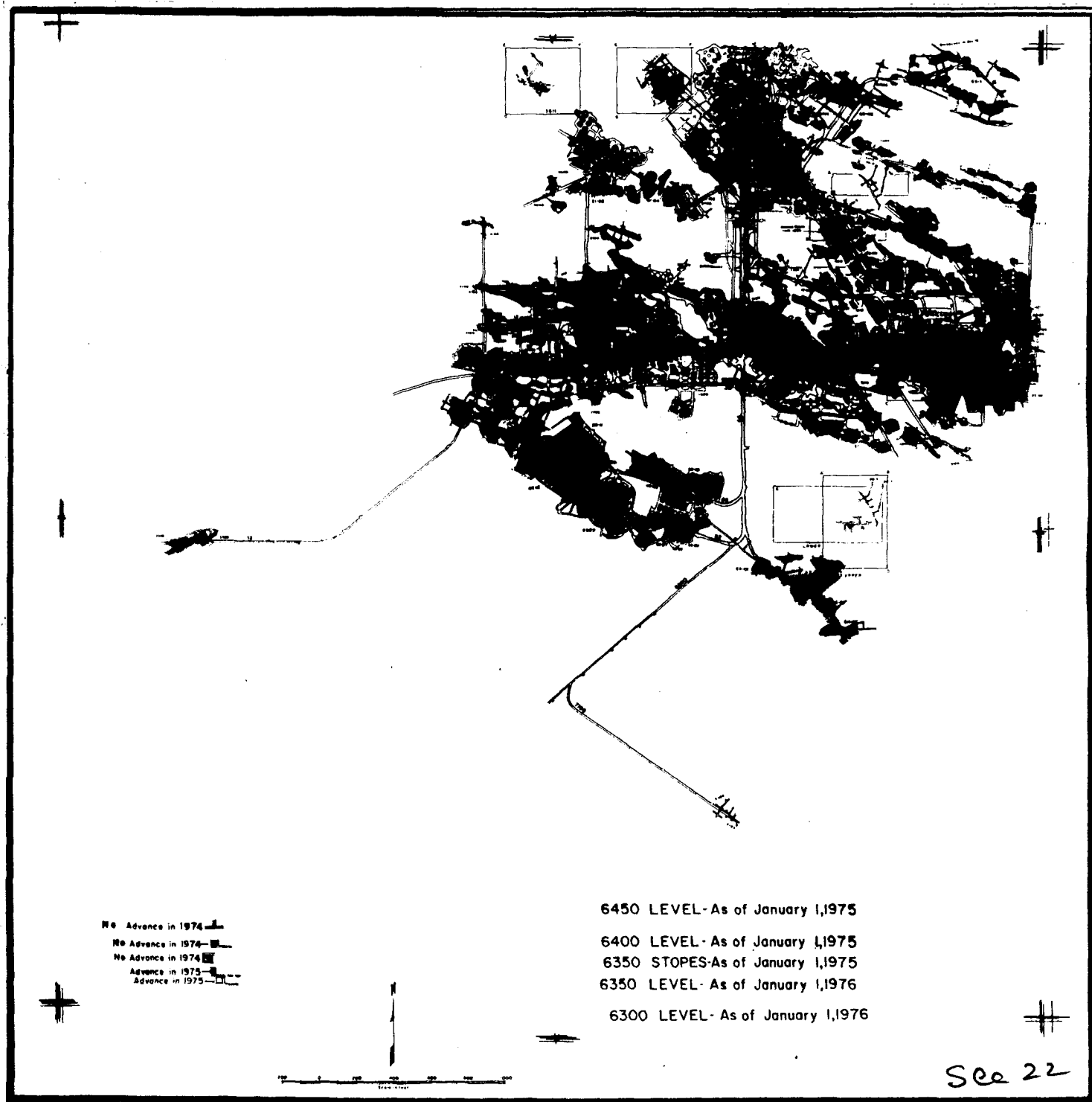
I apologize for the delay in providing this information. As I stated to you in our telephone conversation, much of our resources have been committed to participating in the Mining and Mineral Division proposals to establish hard rock mine regulations in New Mexico. If I can be of further assistance or you need additional information, please contact me at (505) 287-8851, extension 200.

Sincerely,

Terry Fletcher
General Manager

Attachments: As stated

xc: B. Ferdinand (RAMC)
M. Freeman (RAMC)
P. Luthiger (Quivira)
R. Smith (Kerr McGee)
file





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STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

RECEIVED
APR 2 1993

copy 11
Mining and Minerals L.
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195

MINING & MINERALS
DIVISION

**NOTICE OF INTENTION
TO SUSPEND OPERATIONS**

DO NOT WRITE IN THIS SPACE

8 B

Name of Company: Quivira Mining Company
Address: P.O. Box 218, Grants, NM 87020
Mine or Mill Name: Section 22 Mine MSHA Number: None
Location: County McKinley 1/4-1/4 NW/NE Sec. 22 Township 14N Range 10W
Directions to Location if Unsurveyed: _____
Start Up Date: 1960

Type of Operation (please check):

Surface Mine _____ Adit _____ Mill _____ Other _____
Shaft X Insitu _____ Mineral Mined or Milled Uranium

Check One: Permanent _____ Temporary X Suspension Date mid-1991

DESCRIPTION OF SAFEGUARDING PROCEDURES AND MATERIALS USED: (Note: Safeguarding guidelines are available upon request from MMD).

1. Shaft collar is covered with a heavy steel plate welded to support beams.
2. Ventilation holes are covered with steel plates welded or bolted to the top flange of the steel casing.
3. Mine buildings, equipment and materials have been removed except for those to be used in conjunction with leaching.

Signed by: Arthur E. Gebeau

Name (please print) Arthur E. Gebeau
Title: General Manager
Address: P.O. Box 218, Grants
New Mexico 87020
Telephone: (505) 287-8851 ext 200
Date: April 1, 1993

DO NOT WRITE IN THIS SPACE

Approved: yes
By: [Signature]
Signature
Title: Director
Date: 4-5-93

out 4K

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
MINING AND MINERALS DIVISION
MINE REGISTRATION AND GEOLOGICAL SERVICES

SAFEGUARDING INSPECTION CHECKLIST

Mine/Company: Sec. 22 / Quivira
Company phone: 287-8851
Date of inspection: 5/27/93
Name of inspector: KSH
Others present: Art O'Leary
Location of mine (legal description or directions to site): NW/NE/22/14N/10W

Check all the following that apply:

Shaft: ☒ Adit: ☐ Pit: ☐ Quarry: ☐ Mill: ☐ Highwall(s): ☐
Pond: ☐ Other: ☐ (Describe):

Commodities produced: U

Safeguarding methods used: (describe all that apply)

Slope of pit walls or tailings:

Guardrails, fencing, berms or other at highwalls:

Fencing around property: (types, locks, etc.)

Warning signs:

Backfilling of shafts, adits, and auger boreholes: (how far into opening)

Personnel on site: _____ Guards: _____

Temporary closure methods used: (if mine is temporarily suspended)

Openings sealed with steel reinforced concrete or masonry wall:

Shafts sealed with steel reinforced concrete slab or cable net closure: Shaft collar covered

Wire fence: big heavy steel plate welded to support beams. vent. holes covered

Barbed wire (4 strands): W. steel plate bolted down. Land contoured & covered so

Cable closure: < 75 m/sec R/hr. Have a depression they are digging

Heavy rope closure: scrap iron. Wind cover it & raised.

Support posts painted fluorescent color:

Other:

Beginning priority classification: 813

Ending priority classification (to date): 10

Follow up action needed for operator to perform:

Other comments:

Signature of inspector: K. H. H. H.

Title:

Agency:

Address:

Review by MMD Director: Date: _____ Initials: _____

CHECK LIST

NISO date: 4/1/93

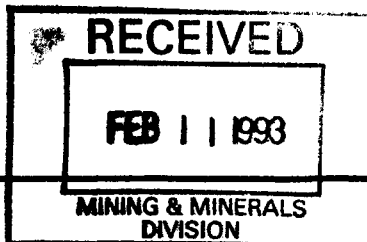
ROS date: _____

Topo: Goat mtn.

Reports: _____



ent
STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department



Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195

MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill/Smelter: Section 22 Mine
Name of Company: Quivira Mining Company Telephone: (505) 287-8851
Address: Box 218, Grants, NM 87020
Manager or Person in Charge and Title (please print): Arthur E. Gebeau, General Manager
Name of Previous Company (if applicable): _____
Location: County McKinley 1/4-1/4 NW/NE Sec. 22 Township 14N Range 10W
Directions to Location if Unsurveyed: _____
USGS Quadrangle Map Name: _____
MSHA Number: 2900541 Start Up Date: 1958

Please list all Standard Industrial Classification (SIC) codes for this operation: _____ , _____

MINE TYPE: ☐ Surface ☐ Adit ☐ Heap Leach ☒ Shaft ☐ In Situ Leach

☐ MILL ☐ SMELTER ☐ Other (describe) _____

Minerals or Commodities Produced: Uranium

Minerals or Commodities Processed: _____

Status: ☐ Active ☐ Intermittent ☒ Inactive ☐ Under Development

Capacity: (indicate cu.yds. or tons, and per day, month or year) 1000 TPD at peak

Mineral Estate Owner: Name: Quivira Mining Company

Address: Box 218, Grants, NM 87020

Telephone: (505) 287-8851

Surface Estate Owner: Name: (same)

Address: (same)

Telephone: () (same)

Mineral Estate Classification: (Please check)

☐ State ☐ Federal
☐ Indian ☒ Private

I hereby swear or affirm that the information
herein provided is true, complete and correct,
and that all information on this form may be
released.

Arthur E. Gebeau
Signature

Arthur E. Gebeau
Name (please print)

Title: General Manager

Address: (as above)

February 10, 1993

Date: _____



MINE/MILL/SMELTER REGISTRATION

Name of Mine/~~Mine~~ Smelter: Section 22 Mine

Name of Operator: Quivira Mining Company Telephone: 287-8851

Address: P.O. Box 218, Grants, New Mexico 87020

Name of Previous Operator (if applicable): _____

Location: County McKinley 1/4-1/4 NE/NW Sec. 22 Township 14N Range 10W

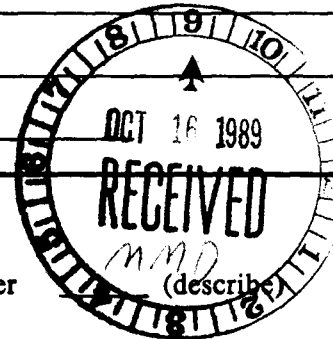
Directions to Location if Unsurveyed: _____

USGS Quadrangle Map Name: Ambrosia Lake

MSHA Number: 2900541

Type of Operation: (please check)

MINE: Surface _____ Adit _____ Other _____
Shaft X In Situ Leach _____
Mill _____ Smelter _____ Heap Leach _____



Mineral or Commodity Produced: Uranium

Mineral Estate Owner: Name Quivira Mining Company
Address P.O. Box 218, Grants, NM 87020
Telephone 287-8851

Surface Estate Owner: Name Quivira Mining Company
Address P.O. Box 218, Grants, NM 87020
Telephone 287-8851

Mineral Estate Classification: (Please check)

State _____ Federal _____ Indian _____ Private X

I hereby swear or affirm that the information
herein provided is true, complete and correct.

[Signature]
Signature

Title: General Manager
Address: P.O. Box 218
Grants, NM 87020

Date: 10-10-89

DO NOT WRITE IN THIS SPACE

Registration Number Assigned _____

By: _____

Signature

Title: _____

Date: _____

Section 23 Mine
Homestake (UNC-Homestake, Homestake-Sapin) 4f
USGS Quad: Ambrosia Lake

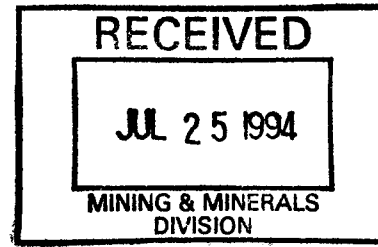
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final

HOMESTAKE MINING COMPANY

P.O. BOX 98
GRANTS, NEW MEXICO 87020
(505) 287-4456

July 22, 1994



State of New Mexico
Energy, Minerals and
Natural Resources Department
Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Attn.: Kay Hatton

Re: Mine Workings Maps For Sections 23 and 25 Mines

Dear Ms. Hatton:

As per your request attached are two mine working maps, one for Section 23 T14N, R10W and one for Section 25 T14N, R10W. These maps are the most up-to-date maps of the mine workings.

Should you have any other questions please contact me at the Grants office.

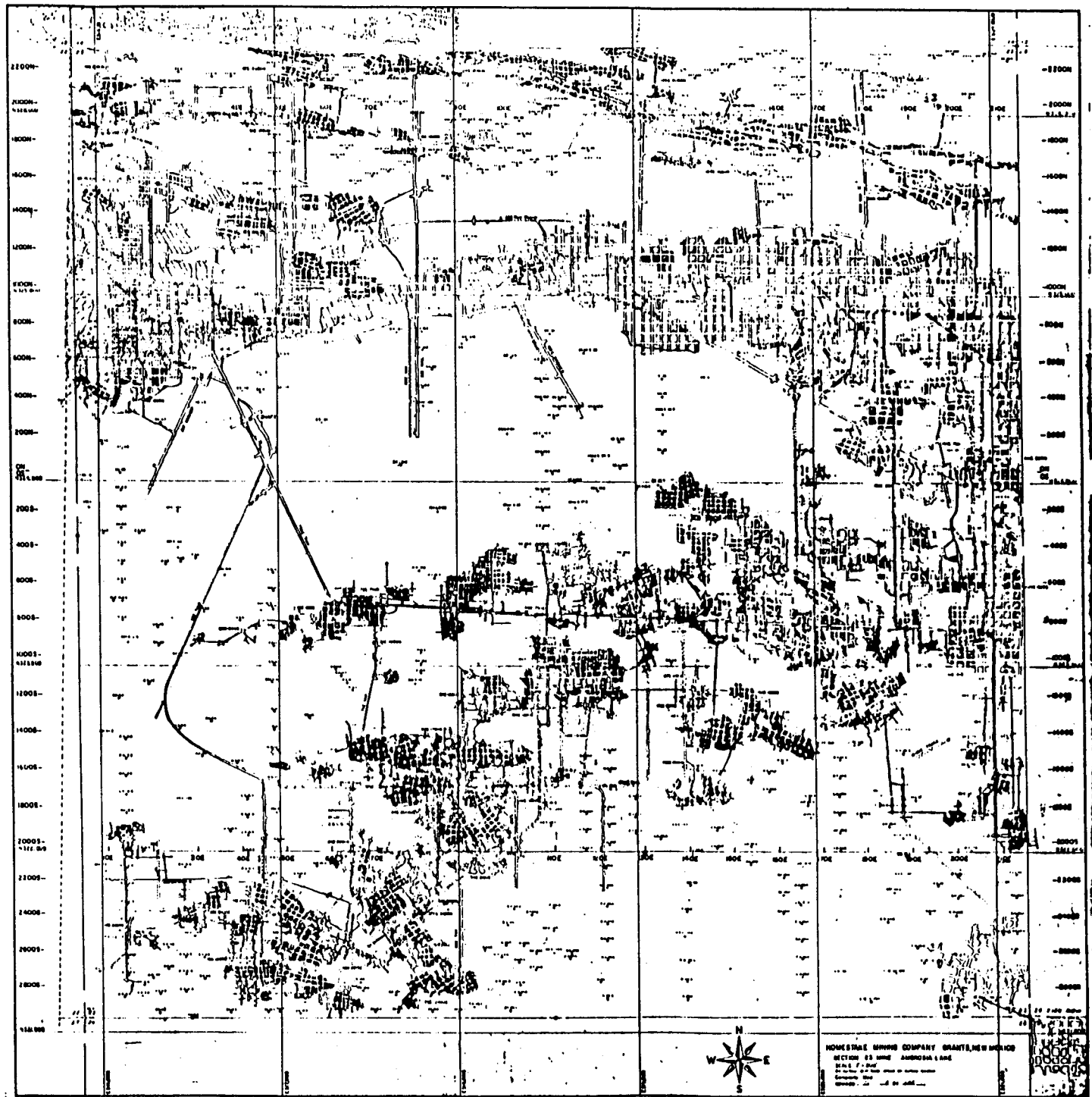
Sincerely,

HOMESTAKE MINING COMPANY

F. R. Craft
Resident Manager

FRC:jg

Attachments (2)



Note: Section corners are highlighted

ent MK

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
MINING AND MINERALS DIVISION
MINE REGISTRATION AND GEOLOGICAL SERVICES

SAFEGUARDING INSPECTION CHECKLIST

Mine/Company: Sec. 23 / Nomestake
Company phone: 287-4456
Date of inspection: 5/27/93
Name of inspector: KSH
Others present: Art Gehean
Location of mine (legal description or directions to site): 23/14N/10W



Check all the following that apply:

Shaft: ☐ Adit: ☐ Pit: ☐ Quarry: ☐ Mill: ☐ Highwall(s): ☐
Pond: ☐ Other: ☐ (Describe):

Commodities produced: Cr

Safeguarding methods used: (describe all that apply)

Slope of pit walls or tailings:

Guardrails, fencing, berms or other at highwalls:

Fencing around property: (types, locks, etc.)

Warning signs:

Backfilling of shafts, adits, and auger boreholes: (how far into opening) Shafts & vent. holes
backfilled w. earth & reinforced concrete caps installed. Surface structures

Personnel on site: _____ Guards: removed, & area uncontrolled & unreg.

Temporary closure methods used: (if mine is temporarily suspended)

Openings sealed with steel reinforced concrete or masonry wall:

Shafts sealed with steel reinforced concrete slab or cable net closure:

Wire fence:

Barbed wire (4 strands):

Cable closure:

Heavy rope closure:

Support posts painted fluorescent color:

Other:

Beginning priority classification: GB

Ending priority classification (to date): 10

Follow up action needed for operator to perform:

Other comments:

Signature of inspector: K. Hatten

Title:

Agency:

Address:

CHECK LIST

NISO date: 3/6/92

ROS date: 2/19/93

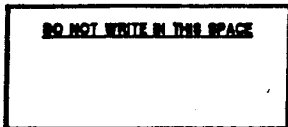
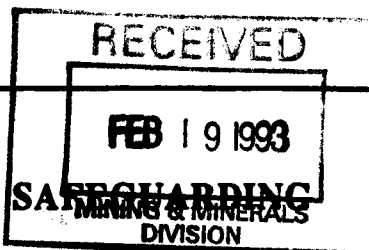
Topo: Amherst Lake

Reports: _____

Review by MMD Director: Date: _____ Initials: _____



ent



REPORT OF SAFEGUARDING

Name of Operator: Homestake Mining Company

Address: P.O. Box 98

Mine Name: Section 23 MSHA Number 2900775

Location: County McKinley 1/4-1/4 Full Sec. 23 Township 14N Range 10W

Directions to Location if Unsurveyed: _____

Type of Operation (please check):

Surface Mine _____ Adit _____ Other _____
Shaft x Insitu _____ Mineral Mined _____

DESCRIPTION OF MATERIALS AND PROCEDURES USED IN COMPLETE SAFEGUARDING:
(include quantities of materials)

Two shafts and 15 ventilation boreholes were backfilled with earth and covered by a reinforced concrete cap that is larger than the shaft or borehole.

See attached schematic drawing of a typical "Shaft or Borehole Configuration."

DATE OF COMPLETION: 7-3-92

I hereby swear or affirm that the information herein provided is true, complete and correct.

[Signature]
Signature

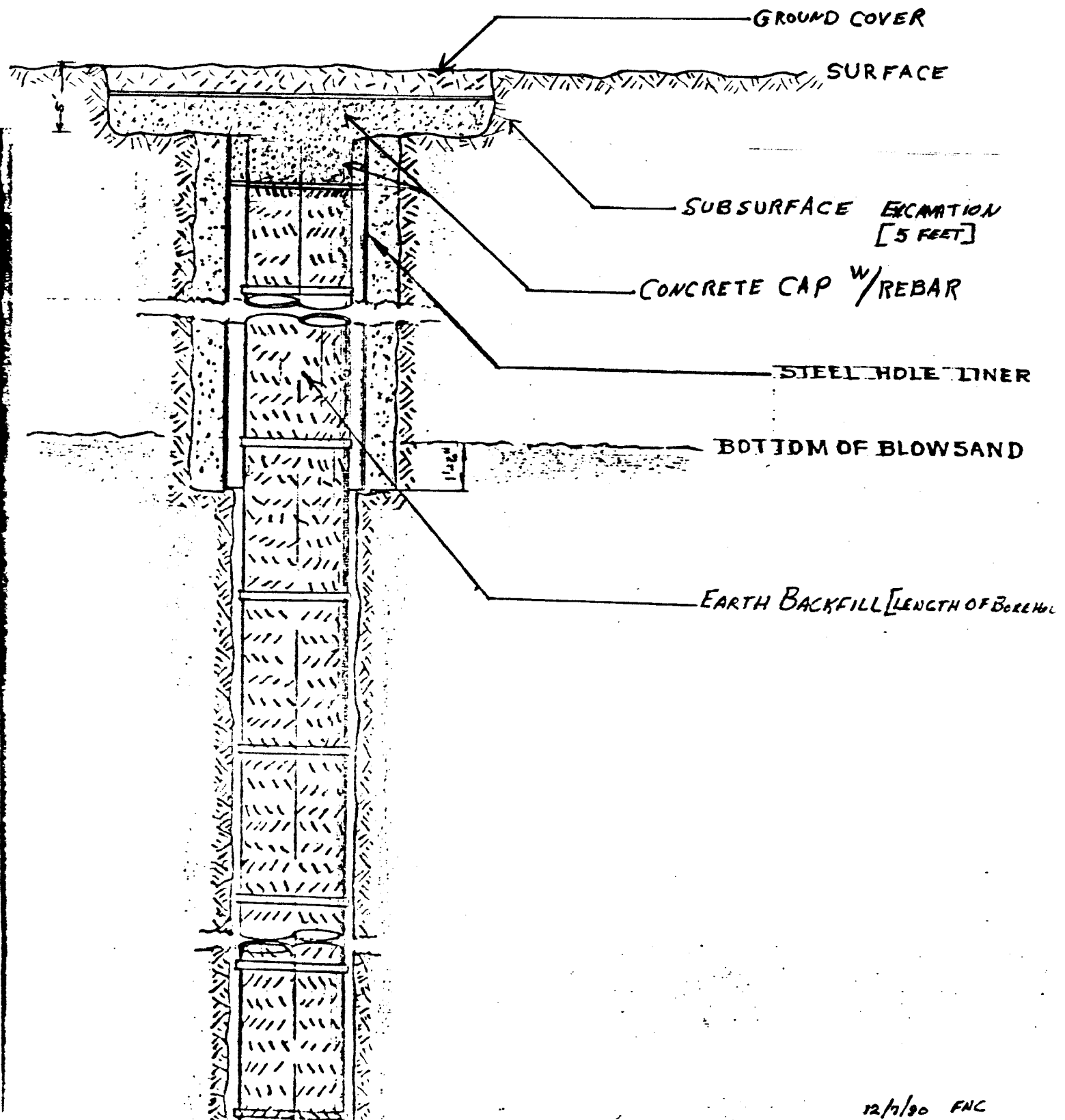
Title: Resident Manager

Address: P.O. Box 98
Grants, NM 87020

Date: 2-16-93

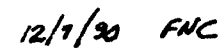
HOMESTAKE MINING COMPANY
GRANTS DIVISION

TYPICAL BOREHOLE CONFIGURATION



12/7/90 FNC

TYPICAL SHAFT CONFIGURATION





NOTICE OF INTENTION
TO SUSPEND OPERATIONS

DO NOT WRITE IN THIS SPACE

6B

Name of Operator: Homestake Mining Company
Address: P.O. Box 98, Grants, NM 87020
Mine Name: Section 23 Mine MSHA Number: 2900775

Location: County McKinley 1/4-1/4 full Sec. 23 Township 14N Range 10W
Directions to Location if Unsurveyed: _____

Type of Operation (please check):

Surface Mine _____ Adit _____ Other _____
Shaft x Insitu _____ Mineral Mined _____

Check One: Permanent x Temporary _____

DESCRIPTION OF MATERIALS AND SAFEGUARDING PROCEDURES:

Due to depressed uranium market conditions Section 23 Mine is permanently closed. Safeguarding of mine openings and reclamation activities have begun. All shafts and ventilation boreholes will be backfilled with earth and a reinforced concrete cap will cover shafts and ventilation boreholes. Surface structures will be removed and disturbed areas will be contoured and seeded.

Signed by: [Signature]
Title: Resident Manager

Address: P.O. Box 98
Grants, NM 87020
Telephone: (505) 287-4456

DO NOT WRITE IN THIS SPACE

Approved [Signature]

By: [Signature]
Signature

Title: Director
Date: 3-9-92



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5923
FAX No.: (505) 827-7195

ANNUAL REPORT
OF
URANIUM MINING OPERATIONS

DO NOT WRITE IN THIS SPACE

An annual report is to be filed for each calendar year period from January 1 through December 31. Reports are to be received by the Mining and Minerals Division before February 15 of the following year. Please submit a separate form for each operation. Data in this report covers calendar year 1990.

Name of Company: Homestake Mining Company
Address: P.O. Box 98, Grants, NM 87020-0011
Mine Name: Section 23 Mine MSHA Number: 29-00590
Location: County McKinley 1/4-1/4 full Sec. 23 Township 14N Range 10W
Directions to Location if Unsurveyed: _____
Name of Person in Charge: Fred Craft
Title: Resident Manager Telephone: 287-4456
Address: P.O. Box 98
Grants, NM 87020-0011

1. Was there a change in mine name, owner or operating company during the reporting year?
_____ Yes X No If yes, give date of change: / /
(month / day / year)

Nature of Change: _____

2. If a subsidiary of another company, provide the following information:

Name of Parent Company: _____
Address: _____

3. Type of Operation: Underground Conventional _____ Insitu Leach _____
Underground Water Recovery X Surface Mine _____
Other _____

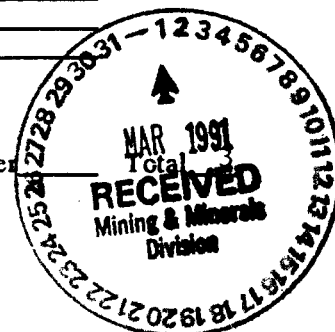
4. Mine Employment Information

- * a. Average number of direct employees: Underground 1 Surface 2 Other _____
b. Number of days of operation: 100 (265 days standby)
c. Total yearly payroll: \$ 197,192
d. Average number of contract employees, haulers, etc. N/A

5. Description and Value of Improvements Made During Year

- | | | |
|--------------------------|-------|---------------|
| a. Power Plant | _____ | \$ <u>N/A</u> |
| b. New Structure(s) | _____ | \$ <u>N/A</u> |
| c. Existing Structure(s) | _____ | \$ <u>N/A</u> |
| d. Equipment | _____ | \$ <u>N/A</u> |
| e. Other (specify) | _____ | \$ <u>N/A</u> |
| TOTAL: | | \$ <u>N/A</u> |

*Average number of employees was calculated using the sum of each month's total and dividing that number by 12.



8. End of Year Summary (Events, expansion/improvement, closures, markets, issues, suggested State action)

Ceased all mine water stope leaching on 4/10/90 and placed mine on standby status.

9. Voluntary Information: Voluntary responses to the following issues would be helpful to the Department.

a. Sales to domestic utilities: _____

Sales to foreign utilities: _____

I hereby swear or affirm that the information herein provided is true, complete and correct.

Signature: _____

Fred Craft

Name (please print)

Title: Resident Manager

Address: P.O. Box 98

Grants, NM 87020-0011

Date: 2/12/91

DO NOT WRITE IN THIS SPACE

ANNUAL REPORT
OF
URANIUM MINING OPERATIONS

An annual report is to be filed for each calendar year period from January 1 through December 31. Reports are to be received by the Mining and Minerals Division before February 15 of the following year.

Name of Operator: Homestake Mining Company
Address: Post Office Box 98, Grants, NM 87020
Mine Name: Section 23 MSHA Number: 29-00590
Location: County McKinley 1/4-1/4 Full Sec. 23 Township 14N Range 10W
Directions to Location if Unsurveyed: _____
Name of Person in Charge: F. R. Craft
Title: Resident Manager Telephone: 287-4456
Address: Post Office Box 98
Grants, NM 87020

1. Was there a change in mine name, owner or operator during the reporting year?
_____ Yes x No If Yes, give date of change: _____/_____/_____
(month/ day / year)

2. If a subsidiary of another company, provide the following information:

Name of Parent Company: _____
Address: _____

3. Type of Operation: Underground Conventional x Insitu Leach _____
Underground Water Recovery x Surface Mine _____

4. Mine Employment Information

a. Total number of employees: Underground 14 Surface 11 Other _____
b. Number of days of operation: 365
c. Total yearly payroll: \$ 883,975

5. Description and Value of Improvements Made During Year

a. Power Plant _____ \$ N/A
b. New Structure(s) _____ \$ N/A
c. Existing Structure(s) _____ \$ N/A
d. Equipment _____ \$ N/A
e. Other (specify) _____ \$ 120,000
45 new surface injection wells.



action,

Conventional underground mining ceased as of November 10, 1989

9. Voluntary Information: Voluntary responses to the following issues would be helpful to the Department.

- a. Sales to domestic utilities: _____
- b. Sales to foreign utilities: _____

I hereby swear or affirm that the information herein provided is true, complete and correct.

H. Bluff
Signature

Title: Resident Manager

Address: PO Box 98
Grants, NM 87020

Date: 2-14-90



MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill Smelter: Section 23 Mine

Name of Operator: Homestake Mining Company Telephone: 287-4456

Address: Post Office Box 98, Grants, NM 87020

Name of Previous Operator (if applicable): N/A

Location: County McKinley 1/4-1/4 Full Sec. 23 Township 14N Range 10W

Directions to Location if Unsurveyed: _____

USGS Quadrangle Map Name: Ambrosia Lake

MSHA Number: 29-00590

Type of Operation: (please check)

MINE: Surface _____ Adit _____ Other ☒ (describe)
Shaft ☒ In Situ Leach _____ Conventional Mining & Mine H₂O Recovery
Mill _____ Smelter _____ Heap Leach _____

Mineral or Commodity Produced: U₃O₈

Mineral Estate Owner: Name Cerrillos Land Company
Address PO Box 27019, Albuquerque, NM 87125
Telephone 881-3050

Surface Estate Owner: Name Elbert Roundy Ranch
Address Bluewater, NM 87005
Telephone 876-2515

Mineral Estate Classification: (Please check)

State _____ Federal _____ Indian _____ Private ☒



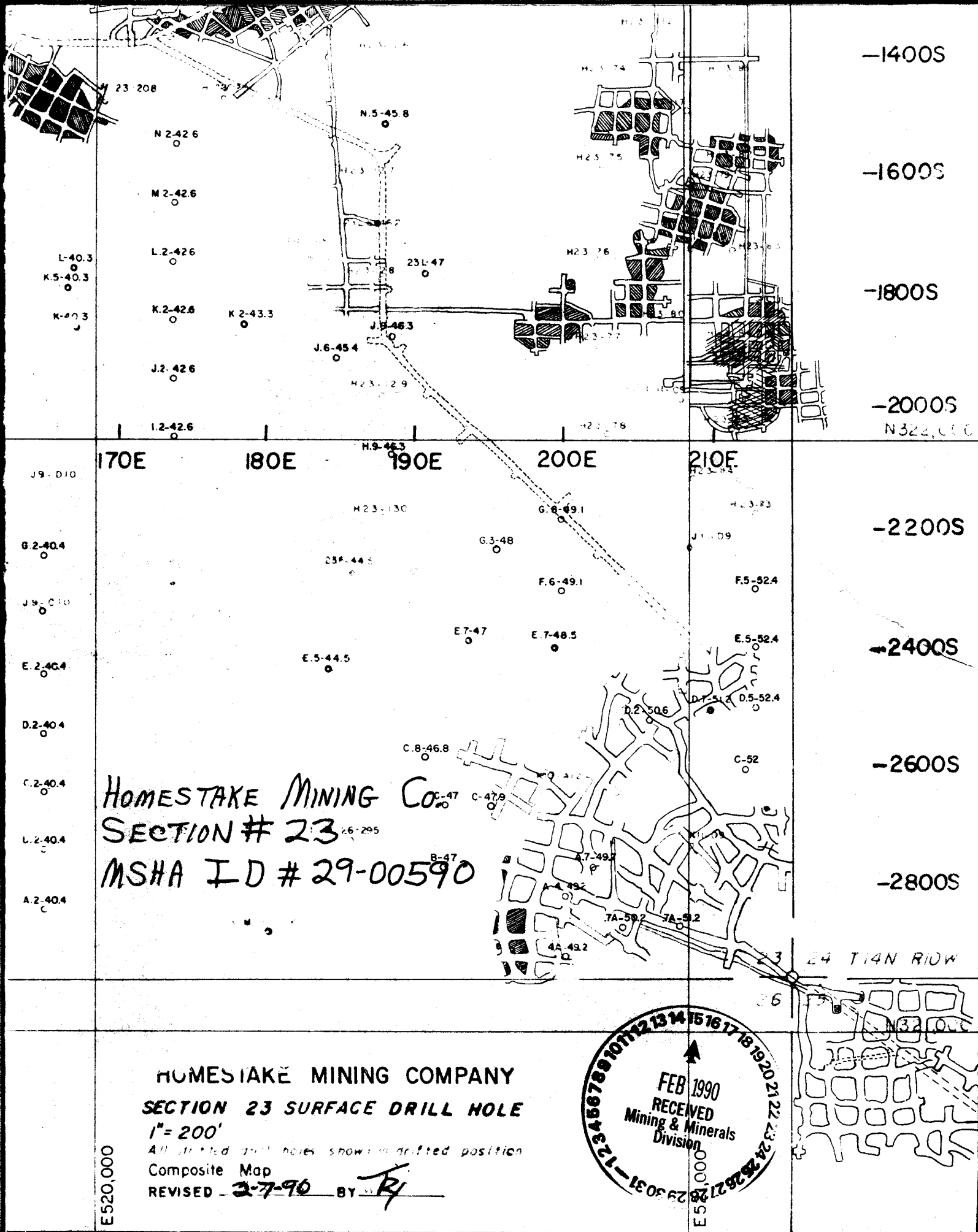
I hereby swear or affirm that the information herein provided is true, complete and correct.

F.A. Craft
Signature

Title: Resident Manager
Address: PO Box 98
Grants, NM 87020

Date: 2/14/90

DO NOT WRITE IN THIS SPACE	
Registration Number Assigned _____	
By: _____	Signature _____
Title: _____	
Date: _____	



Section 24 Mine
Rio Algom (Quivira Mining, Kerr-McGee, Kermac)
USGS Quad: Ambrosia Lake



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Telephone: (505) 476-3400
FAX No.: (505) 476-3402

FORM 12: NOTICE OF INTENT
TO SUSPEND OPERATIONS

For MMD use only

Ar

Name of Company: Rio Algom Mining LLC
Address: PO Box 218, Grants, NM USA 87020
Name of Operation: Section 24 Mine MSHA Number: 2900776
Location: County McKinley 1/4-1/4 Sec. Section 24 Township T14N Range R10W
Directions to Location if Unsurveyed:

Manager or Person in Charge and Title (please print): Terry Fletcher, General Manager
Address: same as above Telephone: () 505-287-8851
Start Up Date: 1959

Photos and/or videos of the mine site may be filed with this form if desired.

TYPE OF OPERATION: ☐ Surface Mine ☐ Adit ☐ Mill ☐ Other Stope leaching
(please check all that apply) ☐ Shaft ☐ Insitu Mineral Mined or Milled uranium

Check One: ☒ Permanent ☐ Temporary Suspension Date 12/31/2002
☐ Temporary Suspension with responsible person(s) on site at all times

DESCRIPTION OF SAFEGUARDING PROCEDURES, MATERIALS AND FINAL SLOPES, AND TIMETABLE FOR COMPLETION OF SAFEGUARDING: (Note: Safeguarding guidelines are available upon request from MMD).

All surface shafts and ventilation holes are safeguarded with metal barricades secured on openings. All electrical power sources are disconnected. Access to sites is locked and fenced.

Reclamation of the site will proceed in accordance with the approved closeout plan for the operation as described within mine permit MK009RE.

Terry J Fletcher
Signature
Terry Fletcher
Name (please print)
Title: General Manager
Address: PO Box 218
Grants, NM 87020
Telephone: () 505-287-8851
Date: April 28, 2003

For MMD use only

Approved _____ Disapproved _____

By: _____
Signature

Title: _____

Date: _____



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Telephone: (505) 476-3400
FAX No.: (505) 476-3402

FORM 11: ANNUAL REPORT OF URANIUM MINING OPERATIONS

11
Section 24 Mine
Quivira Mining Co.

AL

An annual report is to be filed for each calendar year period from January 1 through December 31. Reports are to be received by the Mining and Minerals Division **before April 30** of the following year. **Please submit a separate form for each operation.** Data in this report covers calendar year **2002**. Forms can also be found at www.emnrd.state.nm.us/mining/map/mapforms.htm.

Name of Company: Rio Algom Mining LLC
 Address: PO Box 218, Grants, NM USA 87020
 Mine Name: Section 24 Mine MSHA Number: 2900776
 Location: County McKinley 1/4-1/4 Sec. Section 24 Township T14N Range R10W
 Directions to Location if Unsurveyed:
 Manager or Person in Charge and Title (please print): Terry Fletcher, General Manger
 Address: same as above Telephone: ()
 Start Up Date: 1959

1. Was there a change in mine name, owner or operating company during the reporting year?
☒ Yes ☐ No If yes, give date of change: 2 / 12 / 02
(month / day / year)
- Nature of Change: Changed to a limited liability corporation
2. If a subsidiary of a larger company, provide the following information:
Name of Parent Company: Rio Algom Mining LLC
Address: 6305 Waterford Blvd., Ste. 325, Oklahoma City, OK 73118
Telephone: () _____
3. Type of Operation: ☐ Underground Conventional ☐ Insitu Leach
☒ Underground Water Recovery ☐ Surface Mine
☐ Other _____
4. Mine Employment Information
a. Average number of direct employees: Underground _____ Surface 3 Other _____ Total direct _____
b. Total number of days of operation: _____
c. Total yearly payroll: \$ 100,000
d. Full time employees in **reclamation** (include in Total direct) 3 (all mines)
e. Average number of **contract** employees, haulers, etc. (do not include in total direct): _____
5. Description and Value of Improvements Made During Year
- a. Power Plant: \$ _____
- b. New Structure(s): \$ _____
- c. Existing Structure(s): \$ _____
- d. Equipment: \$ _____
- e. Other (specify): \$ _____
- TOTAL: \$ 0

6. Percent Production by Mineral Estate Classification:

Federal	_____	Private	100%
State	_____	Indian (Reservation)	_____
		Indian (Non-Reservation)	_____

7. Production, Recovery and Value During year

a. Annual Production:

Ore mined (ST)	_____
Ore milled (ST)	_____
FOB mine value (\$)	_____
Contained U ₃ O ₈ (Lbs.)	_____

b. End of Year Inventory:

Ore on hand at beginning of reporting year (ST)	_____
Ore on hand at close of reporting year (ST)	_____

c. Depth of production (ft.): _____

d. Annual U₃O₈ recovery (Lbs.):

From ore	_____
From mine water (stope leaching)	0
From insitu leach	_____

e. Net recovery credited to this mine (Lbs. U₃O₈): _____

f. Unit value of recovered U₃O₈ (\$/Lb.): _____

g. Total sales value (\$/Lb.): _____

h. Mine water production (de-watering) (GPD): 0

i. Capacity: 0

8. Size of Operation in Acres: 640 Acreage Disturbed to Date: 45
Acreage Reclaimed to Date: _____

9. End of Year Summary: (Events, expansion/improvement, closures, markets, issues, suggested State action)

10. Voluntary Information: Voluntary responses to the following questions would be helpful to the Department.

a. Sales to domestic utilities: _____
b. Sales to foreign utilities: _____

I hereby swear or affirm that the information herein provided is true, complete and correct.

Signature Terry F Fletcher Date: 4/25/03

(PLEASE COMPLETE ALL OF THE FOLLOWING LEGIBLY)

Terry Fletcher

Name (please print)
General Manager

Title: _____

Address: PO Box 218

Grants, NM USA 87020

E-mail: tfletcher@ramc.net



SECTION 24

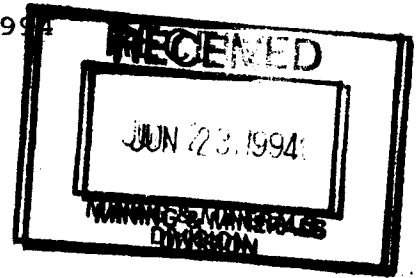
QUIVIRA MINING COMPANY

POST OFFICE BOX 218 • GRANTS, NEW MEXICO 87020

June 21, 1994

Certified Mail

Return Receipt Requested P 762 964 387



Ms. Kay Hatton, Mine Program Manager
Department of Energy, Minerals and Natural Resources
2040 South Pacheco Street
Santa Fe, NM 87505

Dear Ms. Hatton:

Please find enclosed 8 1/2 X 11 maps depicting the final survey of the underground workings for Quivira Mining Company's mines (Sections 22, 24, 30W, 30, 19, 17, 33, 35 and 36). These maps indicate the present extent of the underground workings.

I have also attached a June 9, 1993, letter from Mr. Art Gebeau to Energy, Minerals and Natural Resources clarifying our position regarding Church Rock I and Church Rock IE as these mines are not owned by Quivira Mining, but rather by Kerr McGee Corporation. Prior to January 1989, Quivira (and its properties at Ambrosia Lake) was a wholly owned subsidiary of Kerr McGee Corporation. In January 1989, Quivira and its Ambrosia Lake properties were purchased from Kerr McGee by Rio Algom Mining Corp. The Church Rock mine I and IE properties were not included in the sale and remained with Kerr McGee. January 1989 to July 1992 Quivira did reclamation work on the Church Rock mines as a contractor on behalf of Kerr McGee, its owner. Commencing in July 1992, Kerr McGee resumed all responsibility for the reclamation and management of the Church Rock mines. As such, Mr. Roy Smith of Kerr McGee, has been notified of your request to provide final closure maps for the Church Rock mines.

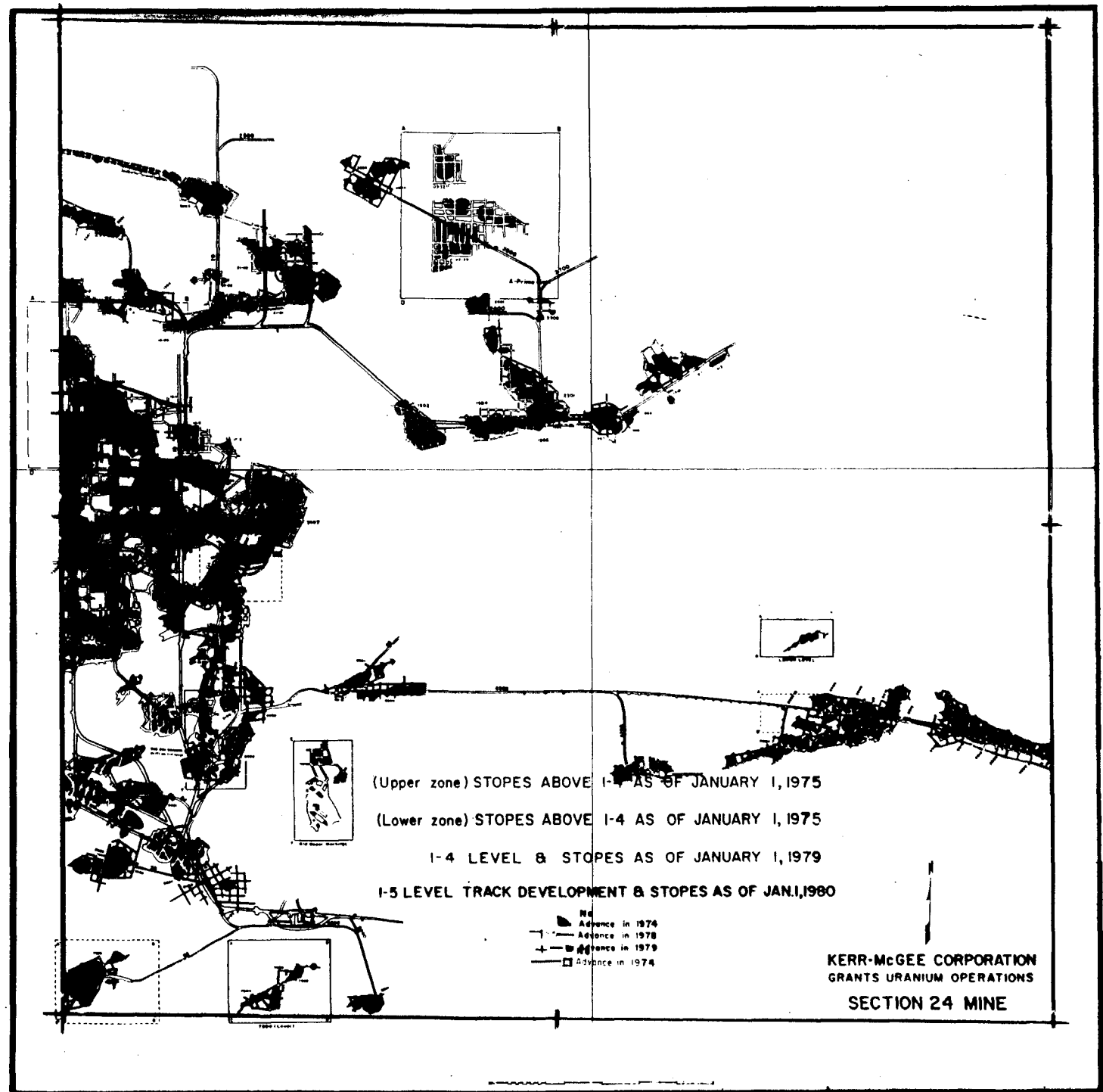
I apologize for the delay in providing this information. As I stated to you in our telephone conversation, much of our resources have been committed to participating in the Mining and Mineral Division proposals to establish hard rock mine regulations in New Mexico. If I can be of further assistance or you need additional information, please contact me at (505) 287-8851, extension 200.

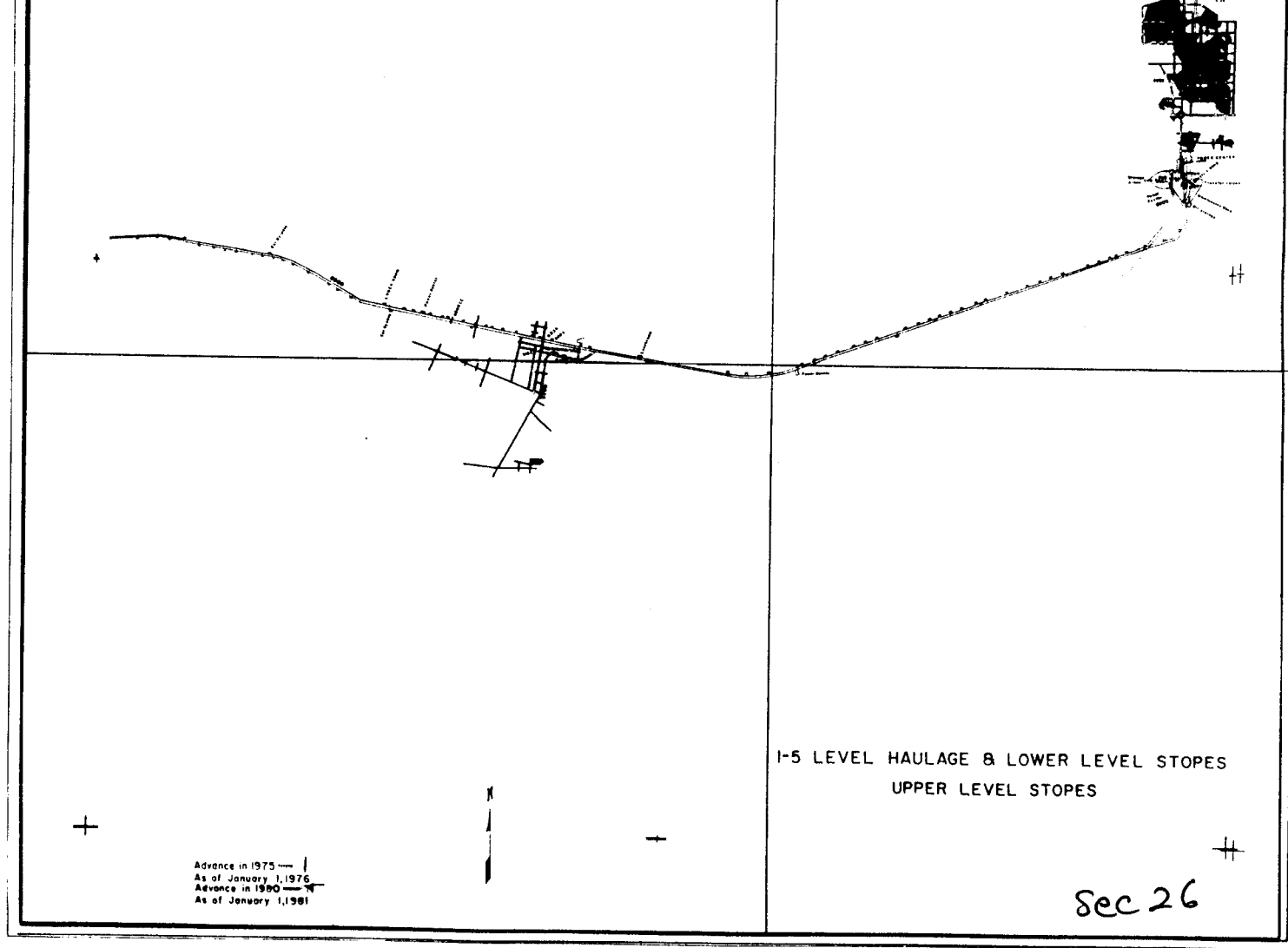
Sincerely,

Terry Fletcher
General Manager

Attachments: As stated

xc: B. Ferdinand (RAMC)
M. Freeman (RAMC)
P. Luthiger (Quivira)
R. Smith (Kerr McGee)
file





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STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
MINING AND MINERALS DIVISION
MINE REGISTRATION AND GEOLOGICAL SERVICES

SAFEGUARDING INSPECTION CHECKLIST

Mine/Company: Sec. 24 / Quivira

Company phone: 287-8851

Date of inspection: 5/27/93

Name of inspector: KSH

Others present: Art G. Shean

Location of mine (legal description or directions to site):

Check all the following that apply:

Shaft: ☒ Adit: ☐ Pit: ☐ Quarry: ☐ Mill: ☐ Highwall(s): ☐

Pond: ☐ Other: ☐ (Describe):

Commodities produced: Ur

Safeguarding methods used: (describe all that apply)

Slope of pit walls or tailings:

Guardrails, fencing, berms or other at highwalls:

Fencing around property: (types, locks, etc.)

Warning signs:

Backfilling of shafts, adits, and auger boreholes: (how far into opening)

Personnel on site: _____ Guards: _____

Temporary closure methods used: (if mine is temporarily suspended)

Openings sealed with steel reinforced concrete or masonry wall:

Shafts sealed with steel reinforced concrete slab or cable net closure:

Wire fence:

Barbed wire (4 strands):

Cable closure:

Heavy rope closure:

Support posts painted fluorescent color:

Other:

Beginning priority classification:

Ending priority classification (to date): 0 - mine still active as old slope leaching

Follow up action needed for operator to perform: (MWR)

Other comments:

Signature of inspector: K. Hatton

Title:

Agency:

Address:

Review by MMD Director: Date: _____ Initials: _____

CHECK LIST

NISO date: _____

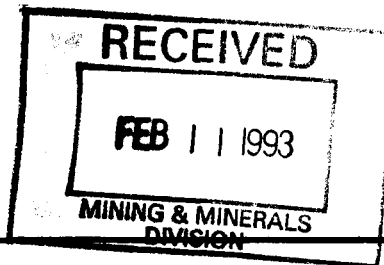
ROS date: _____

Topo: _____

Reports: _____



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department



Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195

MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill/Smelter: Section 24 Mine
Name of Company: Quivira Mining Company Telephone: (505) 287-8851
Address: Box 218, Grants, NM 87020
Manager or Person in Charge and Title (please print): Arthur E. Gebeau, General Manager
Name of Previous Company (if applicable): _____
Location: County McKinley 1/4-1/4 SE/SW Sec. 24 Township 14N Range 10W
Directions to Location if Unsurveyed: _____
USGS Quadrangle Map Name: _____
MSHA Number: 2900541 Start Up Date: 1959

Please list all Standard Industrial Classification (SIC) codes for this operation: _____

MINE TYPE: ☐ Surface ☐ Adit ☐ Heap Leach ☒ Shaft ☐ In Situ Leach

☐ MILL ☐ SMELTER ☐ Other (describe) _____

Minerals or Commodities Produced: Uranium

Minerals or Commodities Processed: _____

Status: ☒ Active ☐ Intermittent ☐ Inactive ☐ Under Development

Capacity: (indicate cu.yds. or tons, and per day, month or year) 1000 TPD at peak

Mineral Estate Owner: Name: Quivira Mining Company

Address: Box 218, Grants, NM 87020

Telephone: (505) 287-8851

Surface Estate Owner: Name: (same)

Address: (same)

Telephone: () (same)

Mineral Estate Classification: (Please check)

☐ State ☐ Federal
☐ Indian ☒ Private

I hereby swear or affirm that the information
herein provided is true, complete and correct,
and that all information on this form may be
released.

Arthur E. Gebeau
Signature

Arthur E. Gebeau
Name (please print)

Title: General Manager

Address: (as above)

Date: February 10, 1993



MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill/Smelter: Section 24 Mine

Name of Operator: Quivira Mining Company Telephone: 287-8851

Address: P.O. Box 218, Grants, New Mexico 87020

Name of Previous Operator (if applicable): _____

Location: County McKinley 1/4-1/4 SW/SE Sec. 24 Township 14N Range 10W

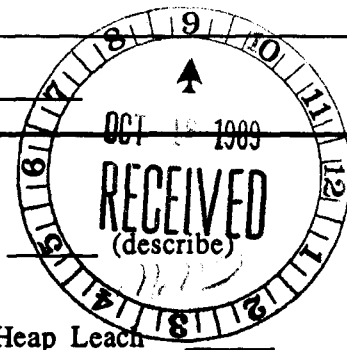
Directions to Location if Unsurveyed: _____

USGS Quadrangle Map Name: Ambrosia Lake

MSHA Number: 2900541

Type of Operation: (please check)

MINE: Surface Adit Other
Shaft X In Situ Leach
Mill Smelter Heap Leach



Mineral or Commodity Produced: Uranium

Mineral Estate Owner: Name Hecla Mining Company
Address 6500 Mineral Drive Box C-8000 Coeur D' Alene, Idaho
Telephone (208) 769-4100 83814-1931

Surface Estate Owner: Name Roundy Ranch
Address P.O. Box 38, Bluewater, New Mexico 87005
Telephone 876-2515

Mineral Estate Classification: (Please check)

State Federal Indian Private X

I hereby swear or affirm that the information
herein provided is true, complete and correct.

[Signature]
Signature

Title: General Manager
Address: P.O. Box 218
Grants, NM 87020

Date: 10-10-89

DO NOT WRITE IN THIS SPACE

Registration Number Assigned _____
By: _____

Signature

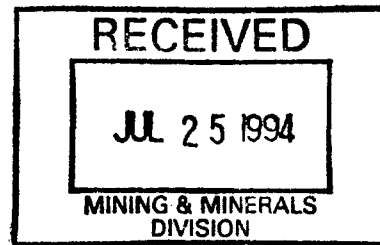
Title: _____
Date: _____

Section 25 Mine
Homestake Mining Co. (UNC-Homestake, Homestake-Sapin)
USGS Quad: Ambrosia Lake

HOMESTAKE MINING COMPANY

P.O. BOX 98
GRANTS, NEW MEXICO 87020
(505) 287-4456

July 22, 1994



State of New Mexico
Energy, Minerals and
Natural Resources Department
Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Attn.: Kay Hatton

Re: Mine Workings Maps For Sections 23 and 25 Mines

Dear Ms. Hatton:

As per your request attached are two mine working maps, one for Section 23 T14N, R10W and one for Section 25 T14N, R10W. These maps are the most up-to-date maps of the mine workings.

Should you have any other questions please contact me at the Grants office.

Sincerely,

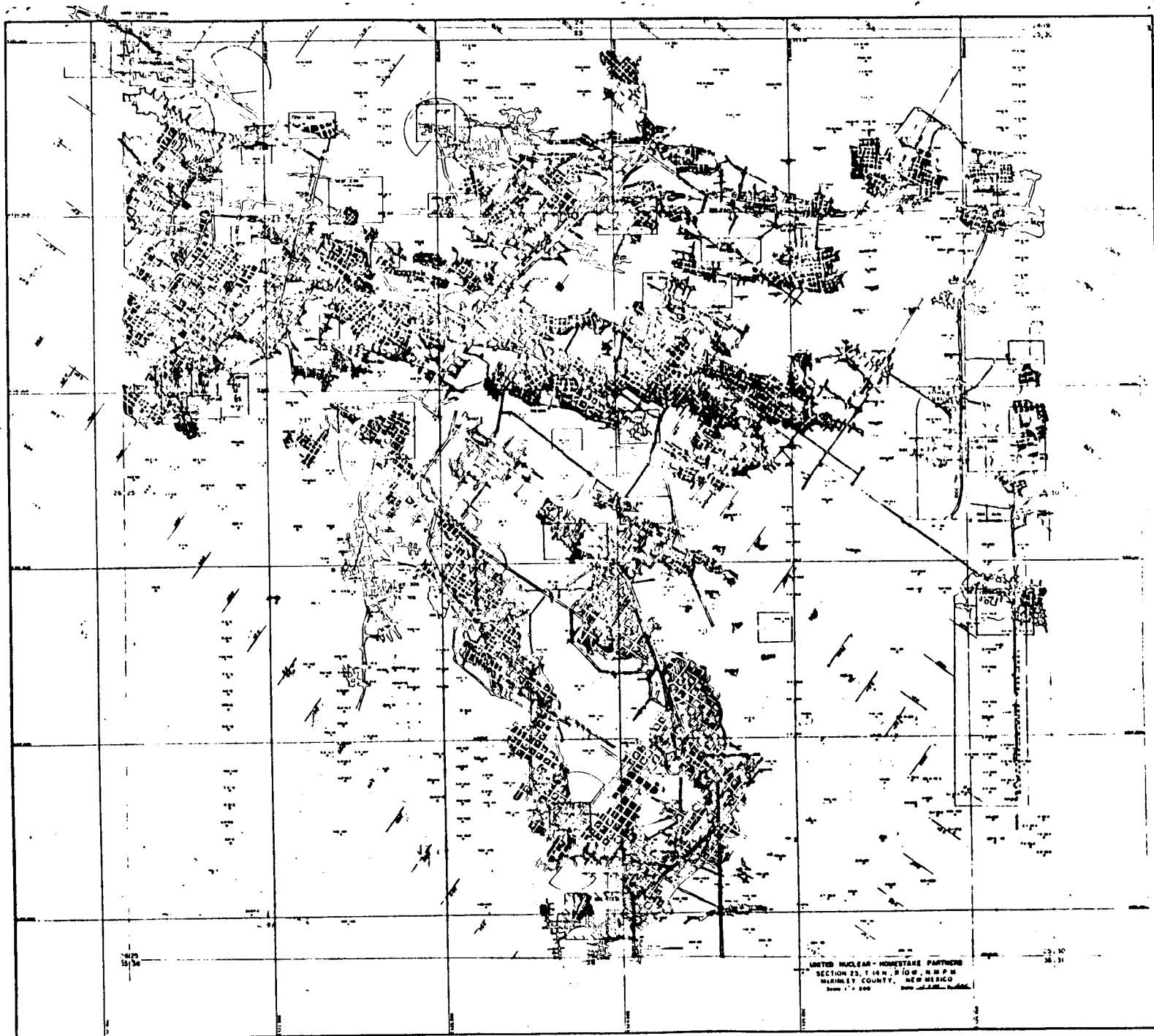
HOMESTAKE MINING COMPANY

F. R. Craft
Resident Manager

FRC:jg

Attachments (2)

Mine: Section 25 T14N, R10W - December 1989



Note, Section corners are highlighted

ent MK

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
MINING AND MINERALS DIVISION
MINE REGISTRATION AND GEOLOGICAL SERVICES

SAFEGUARDING INSPECTION CHECKLIST

Mine/Company: Sec. 25 / Homestake Mining Co.
Company phone: 287-4456
Date of inspection: 5/27/93
Name of inspector: KSH
Others present: Art Gebean, Quivira
Location of mine (legal description or directions to site): 25/14N/10W

Check all the following that apply:

Shaft: ☒ Adit: ☐ Pit: ☐ Quarry: ☐ Mill: ☐ Highwall(s): ☐
Pond: ☐ Other: ☐ (Describe):

Commodities produced: ☒

Safeguarding methods used: (describe all that apply)

Slope of pit walls or tailings:

Guardrails, fencing, berms or other at highwalls:

Fencing around property: (types, locks, etc.)

Warning signs:

Backfilling of shafts, adits, and auger boreholes: (how far into opening) all shafts & vent.
holes have been backfilled w. earth & reinforced concrete caps. ^{install} surf. structures

Personnel on site: Guards: removed. Area recontoured & reveg.

Temporary closure methods used: (if mine is temporarily suspended)

Openings sealed with steel reinforced concrete or masonry wall:

Shafts sealed with steel reinforced concrete slab or cable net closure:

Wire fence:

Barbed wire (4 strands):

Cable closure:

Heavy rope closure:

Support posts painted fluorescent color:

Other:

Beginning priority classification: 6B

Ending priority classification (to date): 10

Follow up action needed for operator to perform:

Other comments: Spoke to Fred Craft - OK w. him that Gebean took me to
mine site when we were in the area.

Signature of inspector: K. Haffm

Title:

Agency:

Address:

CHECK LIST

NISO date: 3/6/92

ROS date: 2/19/93

Topo: Ambrosialake

Reports: _____

Review by MMD Director: Date: _____ Initials: _____



ent

RECEIVED

FEB 19 1993

DO NOT WRITE IN THIS SPACE

REPORT OF SAFEGUARDING
MINING & MINERALS
DIVISION

Name of Operator: Homestake Mining Company

Address: P.O. Box 98, Grants, NM 87020

Mine Name: Section 25 MSHA Number 2900775

Location: County McKinley 1/4-1/4 full Sec. 25 Township 14N Range 10W

Directions to Location if Unsurveyed: _____

Type of Operation (please check):

Surface Mine _____ Adit _____ Other _____
Shaft x Insitu _____ Mineral Mined _____

DESCRIPTION OF MATERIALS AND PROCEDURES USED IN COMPLETE SAFEGUARDING:
(include quantities of materials)

Two shafts and 11 ventilation boreholes were backfilled with earth and covered by a reinforced concrete cap that is larger than the shaft or borehole.

See attached schematic drawing of a typical "Shaft or Borehole Configuration."

DATE OF COMPLETION: 7-3-92

I hereby swear or affirm that the information herein provided is true, complete and correct.

[Signature]
Signature

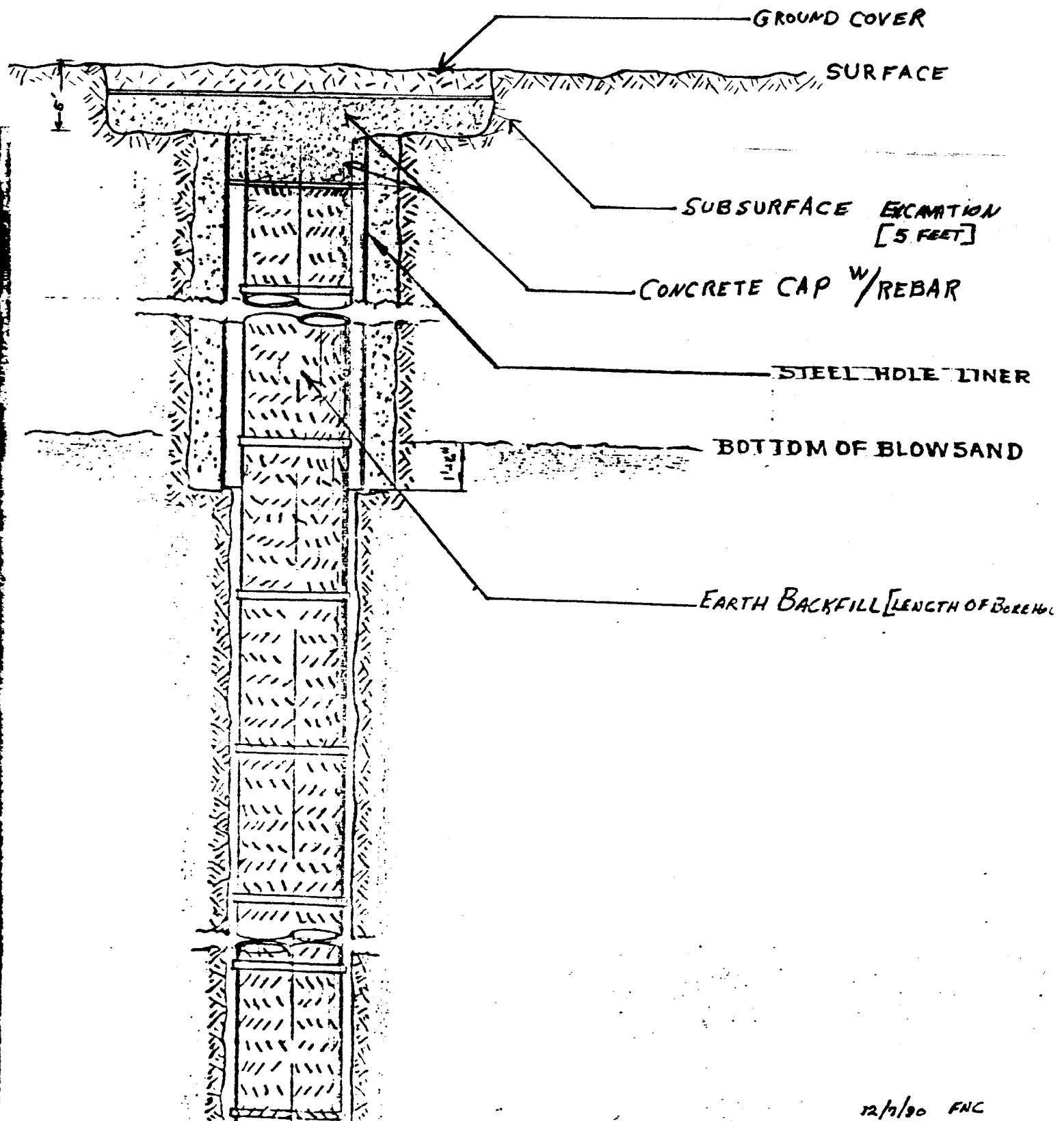
Title: Resident Manager

Address: P.O. Box 98
Grants, NM 87020

Date: 2-16-93

HOMESTAKE MINING COMPANY
GRANTS DIVISION

TYPICAL BOREHOLE CONFIGURATION



TYPICAL SHAFT CONFIGURATION



12/7/90 FNC



NOTICE OF INTENTION
TO SUSPEND OPERATIONS

DO NOT WRITE IN THIS SPACE

68

Name of Operator: Homestake Mining Company
Address: P.O. Box 98, Grants, NM 87020
Mine Name: Section 25 Mine MSHA Number: 2900775

Location: County McKinley 1/4-1/4 full Sec. 25 Township 14N Range 10W
Directions to Location if Unsurveyed: _____

Type of Operation (please check):

Surface Mine _____ Adit _____ Other _____
Shaft x Insitu _____ Mineral Mined _____

Check One: Permanent x Temporary _____

DESCRIPTION OF MATERIALS AND SAFEGUARDING PROCEDURES:

Due to depressed uranium market conditions Section 25 Mine is permanently closed. Safeguarding of mine openings and reclamation activities have begun. All shafts and ventilation boreholes have been backfilled with earth and reinforced concrete cap will cover shafts and ventilation boreholes. Surface structures have been removed and all disturbed areas will be contoured and seeded.

Signed by: H. Phyllis
Title: Resident Manager

Address: P.O. Box 98
Grants, NM 87020
Telephone: (505) 287-4456

DO NOT WRITE IN THIS SPACE

Approved: Yes
By: Max Graham
Signature
Title: Director
Date: 3-9-92



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5923
FAX No.: (505) 827-7195

ANNUAL REPORT
OF
URANIUM MINING OPERATIONS

DO NOT WRITE IN THIS SPACE

An annual report is to be filed for each calendar year period from January 1 through December 31. Reports are to be received by the Mining and Minerals Division before February 15 of the following year. Please submit a separate form for each operation. Data in this report covers calendar year 1990

Name of Company: Homestake Mining Company
Address: P.O. Box 98, Grants, NM 87020
Mine Name: Section 25 Mine MSHA Number: 29-00591
Location: County McKinley 1/4-1/4 full Sec. 25 Township 14N Range 10W
Directions to Location if Unsurveyed: _____
Name of Person in Charge: Fred Craft
Title: Resident Manager Telephone: 287-4456
Address: P.O. Box 98
Grants, NM 87020-0011

1. Was there a change in mine name, owner or operating company during the reporting year?

_____ Yes x No If yes, give date of change: / /
(month/ day / year)

Nature of Change: _____

2. If a subsidiary of another company, provide the following information:

Name of Parent Company: _____
Address: _____

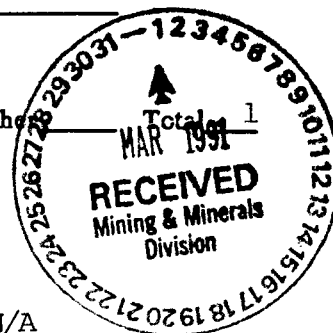
3. Type of Operation: Underground Conventional _____ Insitu Leach _____
Underground Water Recovery x Surface Mine _____
Other _____

4. Mine Employment Information

- * a. Average number of direct employees: Underground 1 Surface _____ Other _____ Total 1
b. Number of days of operation: 100 (265 days standby)
c. Total yearly payroll: \$ 71,706
d. Average number of contract employees, haulers, etc. N/A

5. Description and Value of Improvements Made During Year

- | | | |
|--------------------------|-------|---------------|
| a. Power Plant | _____ | \$ <u>N/A</u> |
| b. New Structure(s) | _____ | \$ <u>N/A</u> |
| c. Existing Structure(s) | _____ | \$ <u>N/A</u> |
| d. Equipment | _____ | \$ <u>N/A</u> |
| e. Other (specify) | _____ | \$ <u>N/A</u> |
| TOTAL: | | \$ <u>N/A</u> |



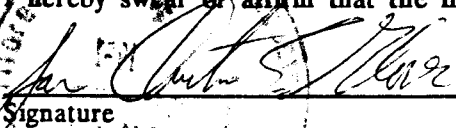
*Average number of employees was calculated using the sum of each month's total and dividing that number by 12.

8. **End of Year Summary** (Events, expansion/improvement, closures, markets, issues, suggested state action,
Ceased all mine water stope leaching on 4/10/90 and placed mine on standby status.

9. **Voluntary Information:** Voluntary responses to the following issues would be helpful to the Department.

- a. Sales to domestic utilities: _____
b. Sales to foreign utilities: _____

I hereby swear or affirm that the information herein provided is true, complete and correct.


Signature

Fred Craft

Name (please print)

Title: Resident Manager

Address: P.O. Box 98
Grants, NM 87020-0011

Date: 2/14/91



MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill Smelter: Section 25 Mine
Name of Operator: Homestake Mining Company Telephone: 287-4456
Address: Post Office Box 98, Grants, NM 87020
Name of Previous Operator (if applicable): _____
Location: County McKinley 1/4-1/4 Full Sec. 25 Township 14N Range 10W
Directions to Location if Unsurveyed: _____
USGS Quadrangle Map Name: Ambrosia Lake
MSHA Number: 29-00591

Type of Operation: (please check)

MINE: Surface _____ Adit _____ Other x (describe)
Shaft x In Situ Leach _____ Mine H₂O Recovery
Mill _____ Smelter _____ Heap Leach _____

Mineral or Commodity Produced: U₃O₈

Mineral Estate Owner: Name Cerrillos Land Company
Address PO Box 27019, Albuquerque, NM 87125
Telephone 881-3050

Surface Estate Owner: Name Elbert Roundy Ranch
Address Bluewater, NM 87005
Telephone 876-2515

Mineral Estate Classification: (Please check)

State _____ Federal _____ Indian _____ Private x

I hereby swear or affirm that the information
herein provided is true, complete and correct.

[Signature]
Signature

Title: Resident Manager
Address: PO Box 98
Grants, NM 87020

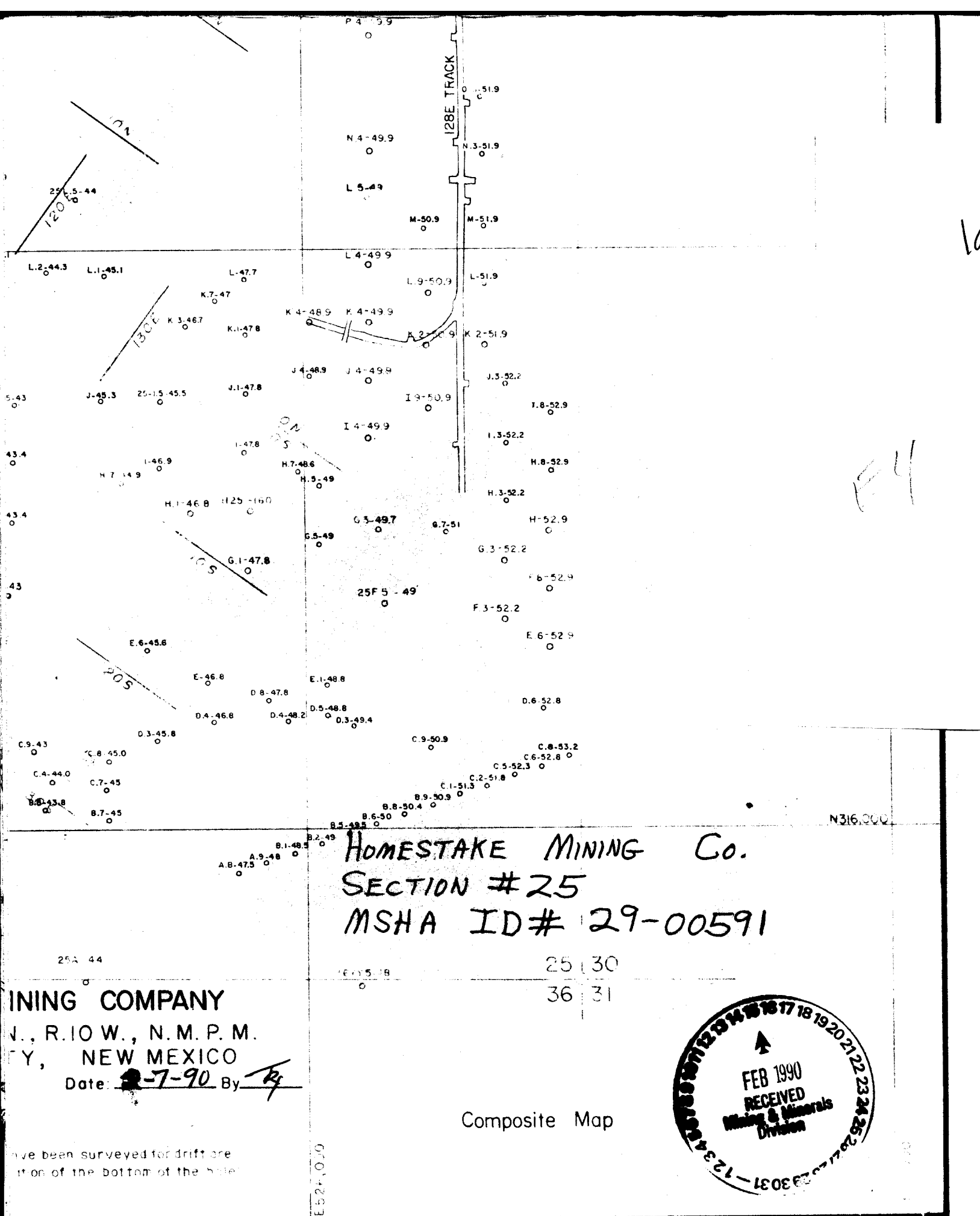
Date: 2-14-90



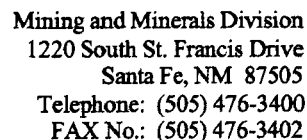
DO NOT WRITE IN THIS SPACE

Registration Number Assigned _____
By: _____
Signature

Title: _____
Date: _____

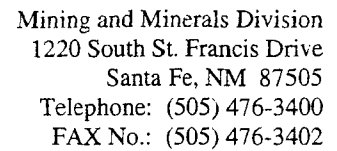


Section 30 Mine
Rio Algom (Quivira Mining, Kerr-McGee, Kermac)
USGS Quad: Ambrosia Lake



For MMD use only

Form 12 (3/01)



11
Section 30 Mine
Quivira Mining Co.

Form 11 (4/03)

Closed shaft and one vent hole and revegetated these areas per the approved closeout plan.

10. Voluntary Information: Voluntary responses to the following questions would be helpful to the Department.

- a. Sales to domestic utilities: N/A
b. Sales to foreign utilities:

I hereby swear or affirm that the information herein provided is true, complete and correct.

Terry J Fletcher Date: 4/25/03
Signature

(PLEASE COMPLETE ALL OF THE FOLLOWING LEGIBLY)

Terry Fletcher

Name (please print)
General Manager

Title:

Address: PO Box 218

Grants, NM USA 87020



E-mail: tfletcher@ramc.net

SECTION 30

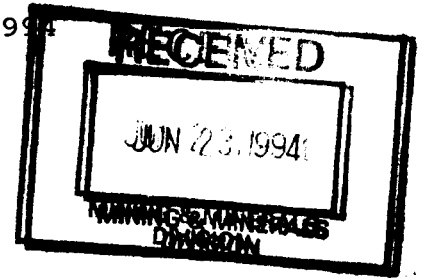
QUIVIRA MINING COMPANY

POST OFFICE BOX 218 • GRANTS, NEW MEXICO 87020

June 21, 1994

Certified Mail
Return Receipt Requested P 762 964 387

Ms. Kay Hatton, Mine Program Manager
Department of Energy, Minerals and Natural Resources
2040 South Pacheco Street
Santa Fe, NM 87505



Dear Ms. Hatton:

Please find enclosed 8 1/2 X 11 maps depicting the final survey of the underground workings for Quivira Mining Company's mines (Sections 22, 24, 30W, 30, 19, 17, 33, 35 and 36). These maps indicate the present extent of the underground workings.

I have also attached a June 9, 1993, letter from Mr. Art Gebeau to Energy, Minerals and Natural Resources clarifying our position regarding Church Rock I and Church Rock IE as these mines are not owned by Quivira Mining, but rather by Kerr McGee Corporation. Prior to January 1989, Quivira (and its properties at Ambrosia Lake) was a wholly owned subsidiary of Kerr McGee Corporation. In January 1989, Quivira and its Ambrosia Lake properties were purchased from Kerr McGee by Rio Algom Mining Corp. The Church Rock mine I and IE properties were not included in the sale and remained with Kerr McGee. January 1989 to July 1992 Quivira did reclamation work on the Church Rock mines as a contractor on behalf of Kerr McGee, its owner. Commencing in July 1992, Kerr McGee resumed all responsibility for the reclamation and management of the Church Rock mines. As such, Mr. Roy Smith of Kerr McGee, has been notified of your request to provide final closure maps for the Church Rock mines.

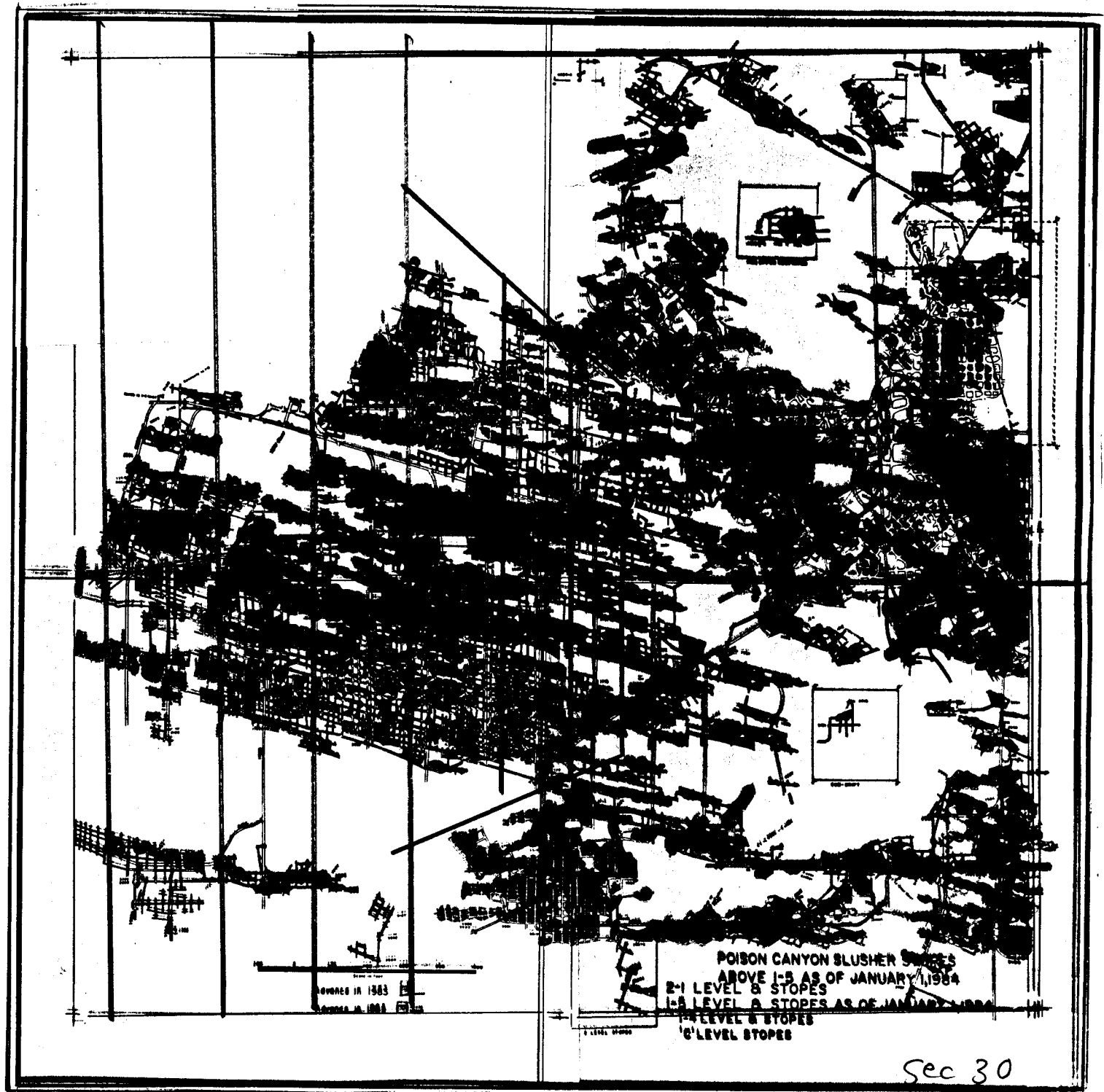
I apologize for the delay in providing this information. As I stated to you in our telephone conversation, much of our resources have been committed to participating in the Mining and Mineral Division proposals to establish hard rock mine regulations in New Mexico. If I can be of further assistance or you need additional information, please contact me at (505) 287-8851, extension 200.

Sincerely,

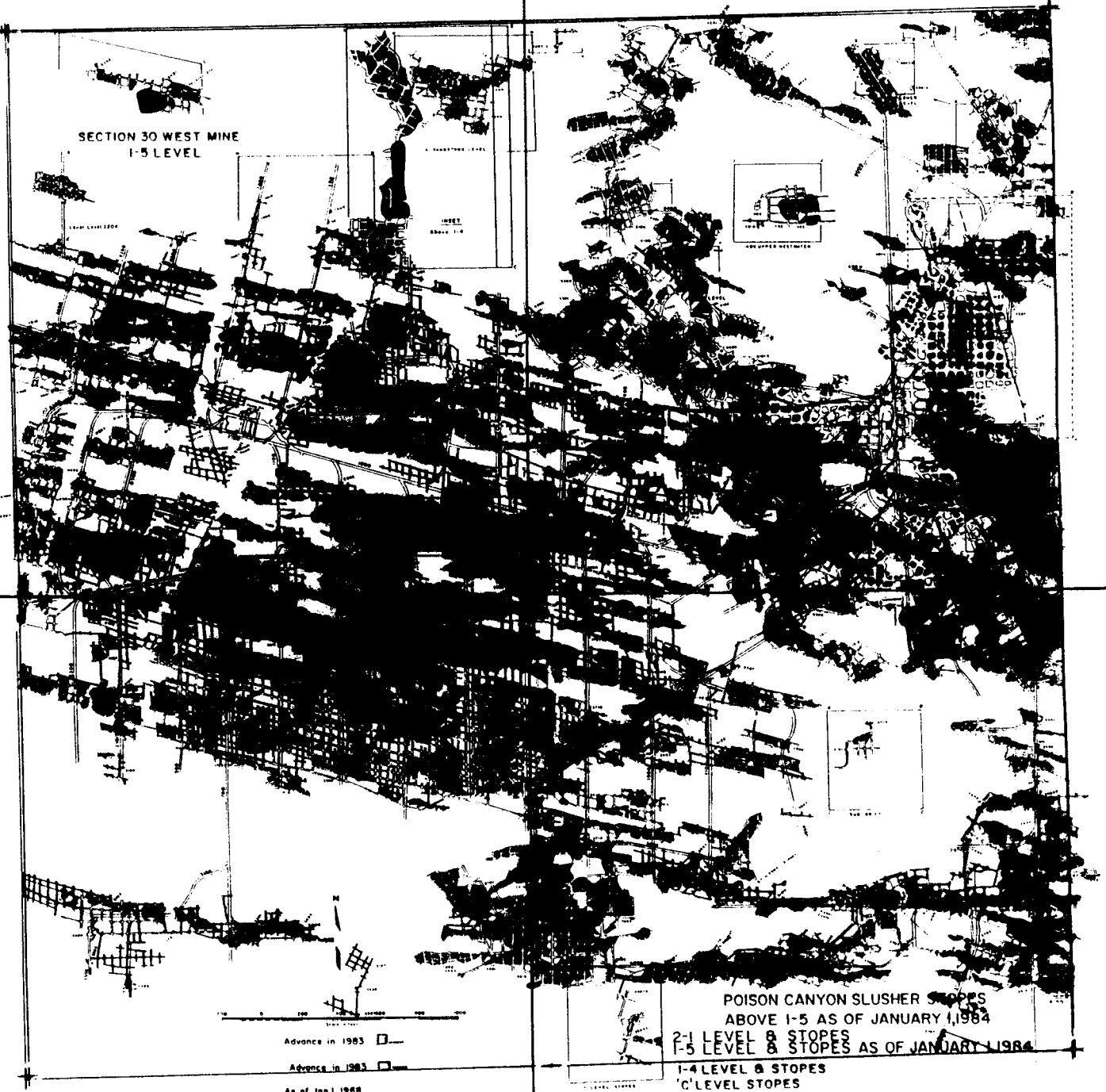
Terry Fletcher
General Manager

Attachments: As stated

xc: B. Ferdinand (RAMC)
M. Freeman (RAMC)
P. Luthiger (Quivira)
R. Smith (Kerr McGee)
file



SECTION 30 WEST MINE
I-5 LEVEL



POISON CANYON SLUSHER STOPES
ABOVE I-5 AS OF JANUARY 1, 1984

2-1 LEVEL & STOPES
2-5 LEVEL & STOPES AS OF JANUARY 1984

1-4 LEVEL & STOPES
1-5 LEVEL STOPES

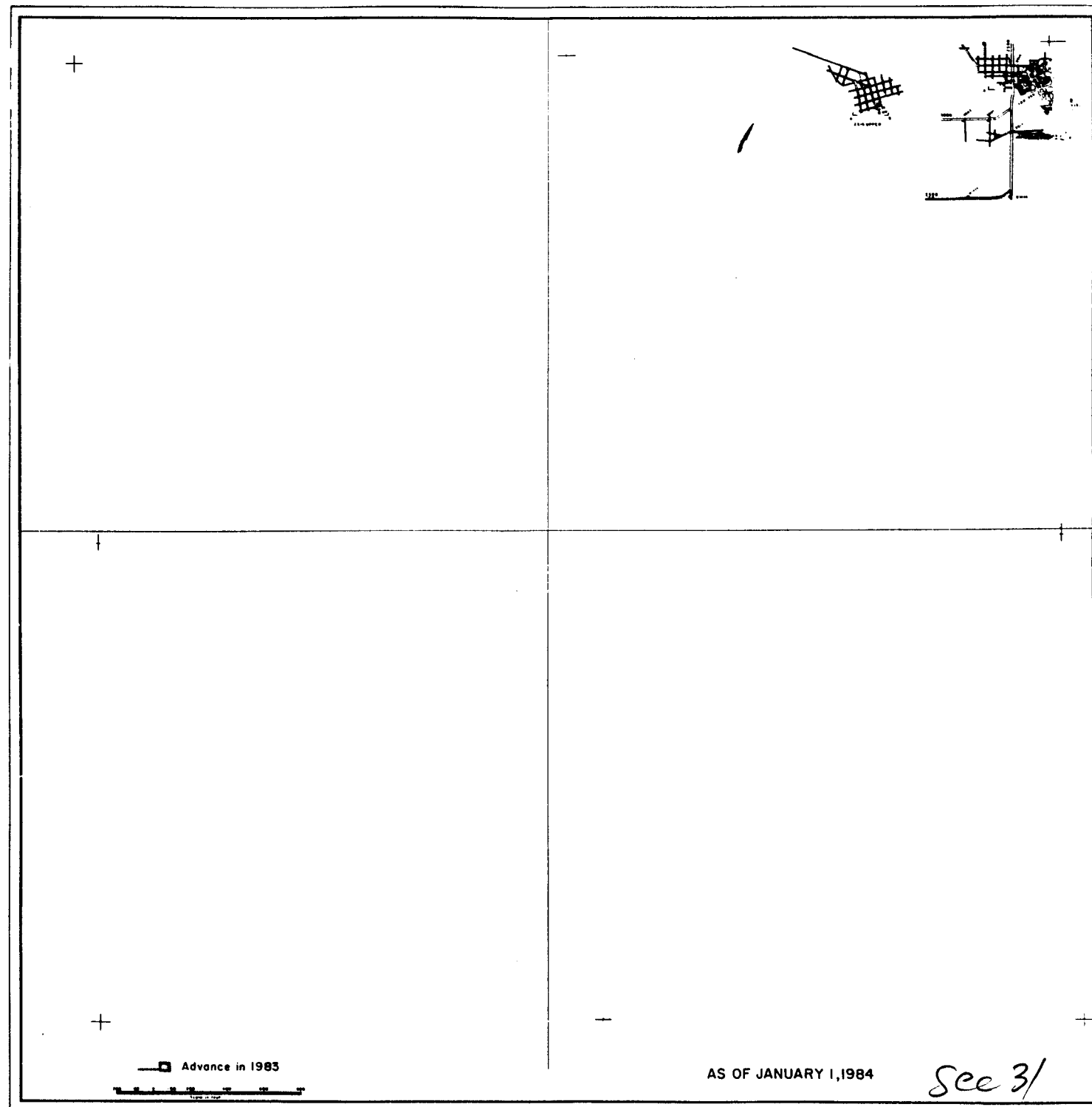
Advance in 1983

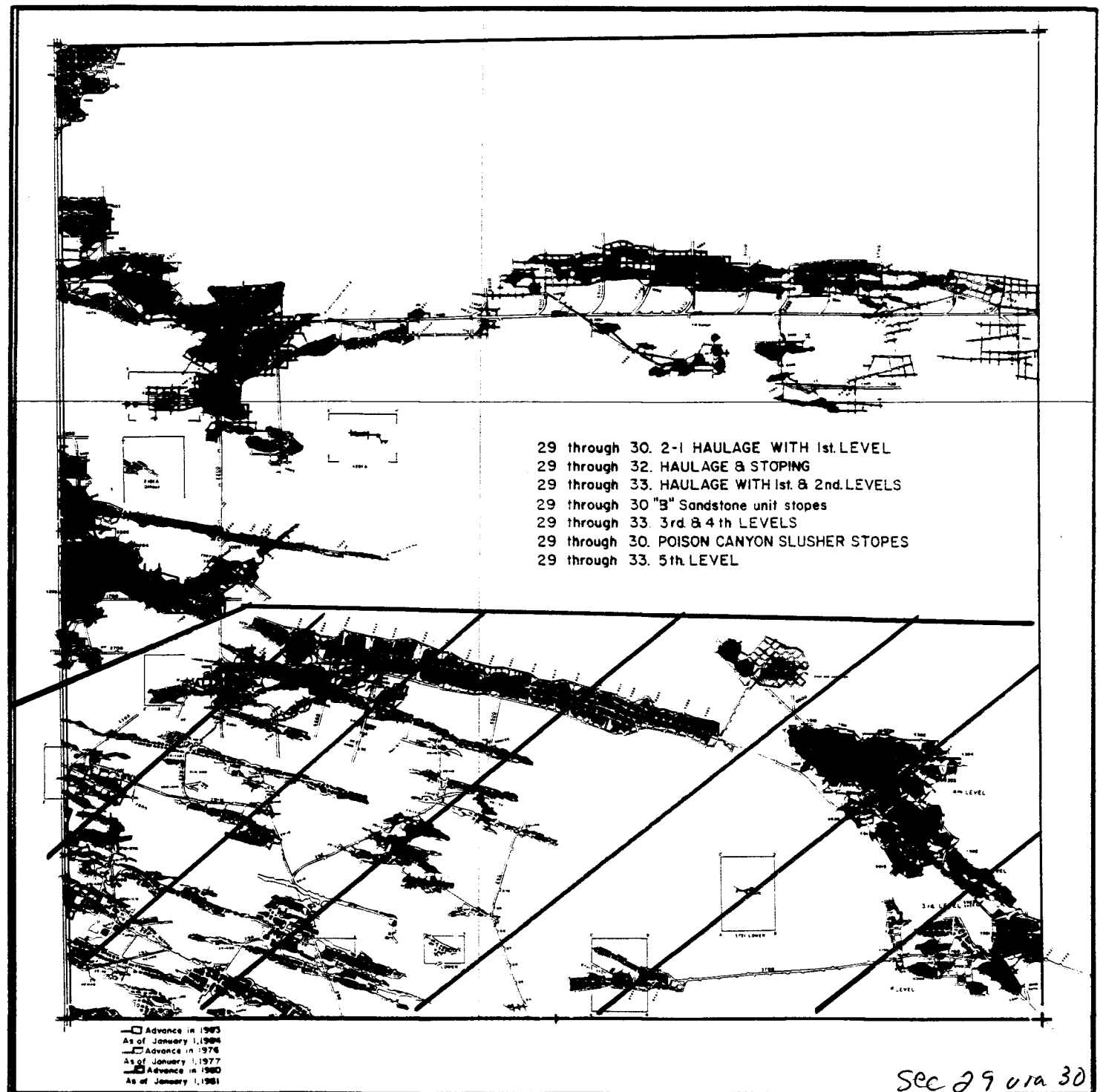
Advance in 1984

As of Jan 1, 1988

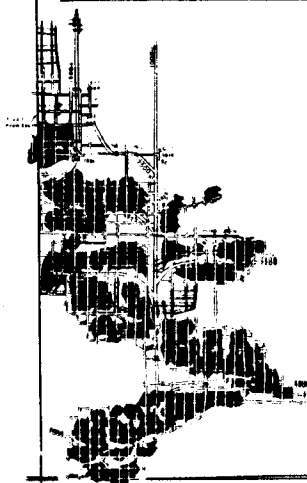
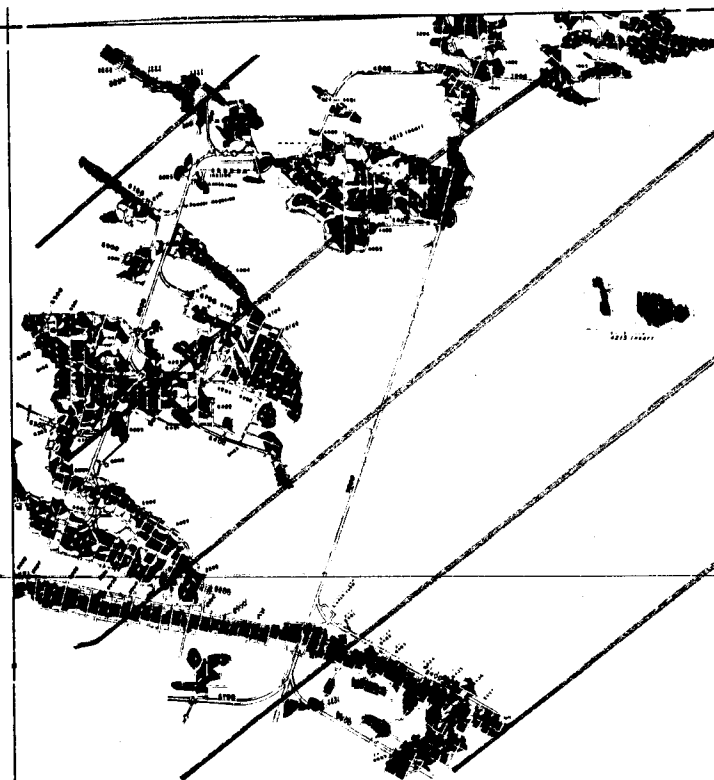
See 30830W

Section 31





Section 26



See 20 via 30

TRACK DEVELOPMENT AND STOPES AS OF JANUARY 1, 1984

Advance in 1983



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
MINING AND MINERALS DIVISION
MINE REGISTRATION AND GEOLOGICAL SERVICES

ent

nk

SAFEGUARDING INSPECTION CHECKLIST

Mine/Company: Sec. 30 / Quivira

Company phone: 287-8851

Date of inspection: 5/27/93

Name of inspector: KSH

Others present: Art Gabeau

Location of mine (legal description or directions to site):

Check all the following that apply:

Shaft: ☒ Adit: ☐ Pit: ☐ Quarry: ☐ Mill: ☐ Highwall(s): ☐

Pond: ☐ Other: ☐ (Describe):

Commodities produced: UR

Safeguarding methods used: (describe all that apply)

Slope of pit walls or tailings: Head frame & the taken down & sold for scrap. Land has been contoured -

Guardrails, fencing, berms or other at highwalls: will be covered to reduce radiation.

Fencing around property: (types, locks, etc.)

Warning signs:

Backfilling of shafts, adits, and auger boreholes: (how far into opening) Openings capped but not plugged.

Personnel on site: Guards:

Temporary closure methods used: (if mine is temporarily suspended)

Openings sealed with steel reinforced concrete or masonry wall:

Shafts sealed with steel reinforced concrete slab or cable net closure:

Wire fence:

Barbed wire (4 strands):

Cable closure:

Heavy rope closure:

Support posts painted fluorescent color:

Other:

Beginning priority classification:

Ending priority classification (to date): 0 - still active as MWR

Follow up action needed for operator to perform:

Other comments:

Signature of inspector: K. H. H.

Title:

Agency:

Address:

Review by MMD Director: Date: Initials:

CHECK LIST

NISO date: _____

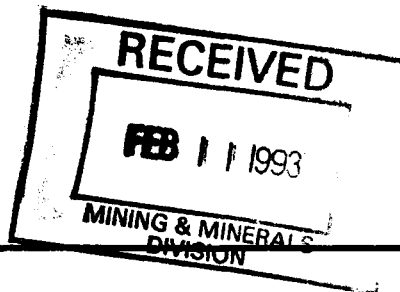
ROS date: _____

Topo: _____

Reports: _____



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department



Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195

MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill/Smelter: Section 30 Mine
Name of Company: Quivira Mining Company Telephone: (505) 287-8851
Address: Box 218, Grants, NM 87020
Manager or Person in Charge and Title (please print): Arthur E. Gebeau, General Manager
Name of Previous Company (if applicable): _____
Location: County McKinley 1/4-1/4 SE/NE Sec. 30 Township 14N Range 9W
Directions to Location if Unsurveyed: _____
USGS Quadrangle Map Name: _____
MSHA Number: 2900541 Start Up Date: 1959

Please list all Standard Industrial Classification (SIC) codes for this operation: _____

MINE TYPE: ☐ Surface ☐ Adit ☐ Heap Leach ☒ Shaft ☐ In Situ Leach

☐ MILL ☐ SMELTER ☐ Other (describe) _____

Minerals or Commodities Produced: Uranium

Minerals or Commodities Processed: _____

Status: ☒ Active ☐ Intermittent ☐ Inactive ☐ Under Development

Capacity: (indicate cu.yds. or tons, and per day, month or year) 1000 TPD at peak

Mineral Estate Owner: Name: Quivira Mining Company Hecla Mining Company
Address: Box 218, Grants, NM 6500 Mineral Drive
Telephone: (505) 287-8851 Couder d'Alene, Idaho 83814
Surface Estate Owner: Name: Quivira Mining Company
Address: Box 218, Grants, NM 87020
Telephone: () (as above)

Mineral Estate Classification: (Please check)

☐ State ☐ Federal
☐ Indian ☒ Private

I hereby swear or affirm that the information
herein provided is true, complete and correct,
and that all information on this form may be
released.

Arthur E. Gebeau
Signature
Arthur E. Gebeau
Name (please print)

Title: General Manager
Address: (as above)
February 10, 1993
Date: _____



MINE/MILL/SMELTER REGISTRATION

Name of Mine/~~Mill~~/~~Smelter~~: Section 30 Mine

Name of Operator: Quivira Mining Company Telephone: 287-8851

Address: P.O. Box 218, Grants, New Mexico 87020

Name of Previous Operator (if applicable): _____

Location: County McKinley 1/4-1/4 NE/SE Sec. 30 Township 14N Range 9W

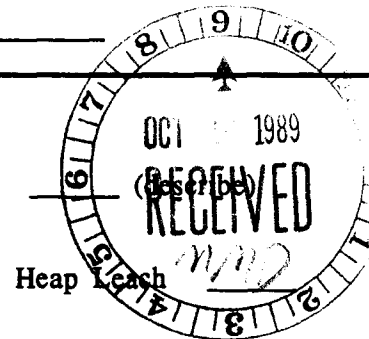
Directions to Location if Unsurveyed: _____

USGS Quadrangle Map Name: Ambrosia Lake

MSHA Number: 2900541

Type of Operation: (please check)

MINE: Surface _____ Adit _____ Other _____
Shaft X In Situ Leach _____
Mill _____ Smelter _____



Mineral or Commodity Produced: Uranium

Mineral Estate Owner: Name Hecla Mining Company
Address 6500 Mineral Drive Box C-8000, Coeur D' Alene, Idaho
Telephone (208)769-4100 83814-1931

Surface Estate Owner: Name Quivira Mining Company
Address P.O. Box 218, Grants, NM 87020
Telephone 287-8851

Mineral Estate Classification: (Please check)

State _____ Federal _____ Indian _____ Private X

I hereby swear or affirm that the information
herein provided is true, complete and correct.

[Signature]
Signature

Title: General Manager
Address: P.O. Box 218
Grants, NM 87020

Date: 10-10-89

DO NOT WRITE IN THIS SPACE

Registration Number Assigned _____

By: _____

Signature

Title: _____

Date: _____

Section 30 W Mine
Rio Algom (Quivira Mining, Kerr-McGee, Kermac)
USGS Quad: Ambrosia Lake



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Telephone: (505) 476-3400
FAX No.: (505) 476-3402

FORM 12: NOTICE OF INTENT
TO SUSPEND OPERATIONS

For MMD use only

Name of Company: Rio Algom Mining LLC
Address: PO Box 218, Grants, NM USA 87020
Name of Operation: Section 30 Mine MSHA Number: 2900776
Location: County McKinley 1/4-1/4 Sec. Section 30 Township T14N Range R9W
Directions to Location if Unsurveyed:
Manager or Person in Charge and Title (please print): Terry Fletcher, General Manager
Address: same as above Telephone: () 505-287-8851
Start Up Date: 1959

Photos and/or videos of the mine site may be filed with this form if desired.

TYPE OF OPERATION: ☐ Surface Mine ☐ Adit ☐ Mill ☐ Other Stope leaching
(please check all that apply) ☐ Shaft ☐ Insitu Mineral Mined or Milled uranium

Check One: ☒ Permanent ☐ Temporary Suspension Date 12/31/2002
☐ Temporary Suspension with responsible person(s) on site at all times

DESCRIPTION OF SAFEGUARDING PROCEDURES, MATERIALS AND FINAL SLOPES, AND TIMETABLE FOR
COMPLETION OF SAFEGUARDING: (Note: Safeguarding guidelines are available upon request from MMD).

All surface shafts and ventilation holes are safeguarded with metal barricades secured on openings. All electrical power sources are disconnected. Access to sites is locked and fenced.

Reclamation of the site will proceed in accordance with the approved closeout plan for the operation as described within mine permit MK009RE.

Signature Terry Fletcher
Terry Fletcher
Name (please print)
Title: General Manager
Address: PO Box 218
Grants, NM 87020
Telephone: () 505-287-8851
Date: April 28, 2003

For MMD use only

Approved _____ Disapproved _____
By: _____
Signature
Title: _____
Date: _____



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Telephone: (505) 476-3400
FAX No.: (505) 476-3402

FORM 11: ANNUAL REPORT
OF
URANIUM MINING OPERATIONS

11
Section 30w Mine
Quivira Mining Co.

Ar

An annual report is to be filed for each calendar year period from January 1 through December 31. Reports are to be received by the Mining and Minerals Division **before April 30** of the following year. **Please submit a separate form for each operation.** Data in this report covers calendar year **2002**. Forms can also be found at www.emnrd.state.nm.us/mining/map/mapforms.htm.

Name of Company: Rio Algom Mining LLC
Address: PO Box 218, Grants, NM USA 87020
Mine Name: Section 30W MSHA Number: 2900776
Location: County McKinley 1/4-1/4 Sec. Section 30 Township T14N Range R9W
Directions to Location if Unsurveyed:
Manager or Person in Charge and Title (please print): Terry Fletcher, General Manager
Address: same as above Telephone: ()
Start Up Date: 1970

1. Was there a change in mine name, owner or operating company during the reporting year?

☒ Yes ☐ No If yes, give date of change: 2 / 12 / 02
(month / day / year)

Nature of Change: Changed to a limited liability corporation

2. If a subsidiary of a larger company, provide the following information:

Name of Parent Company: Rio Algom Mining LLC
Address: 6305 Waterford Blvd., Ste. 325, Oklahoma City, OK 73118
Telephone: ()

3. Type of Operation: ☐ Underground Conventional ☐ Insitu Leach
☒ Underground Water Recovery ☐ Surface Mine
☐ Other

4. Mine Employment Information

a. Average number of direct employees: Underground Surface 3 Other Total direct 3
b. Total number of days of operation:
c. Total yearly payroll: \$ 100,00
d. Full time employees in **reclamation** (include in Total direct) 3 (all mines)
e. Average number of **contract** employees, haulers, etc. (do not include in total direct):

5. Description and Value of Improvements Made During Year

a. Power Plant: \$
b. New Structure(s): \$
c. Existing Structure(s): \$
d. Equipment: \$
e. Other (specify): \$

TOTAL: \$ 0

9. End of Year Summary: (Events, expansion/improvement, closures, markets, issues, suggested State action)

10. Voluntary Information: Voluntary responses to the following questions would be helpful to the Department.

- a. Sales to domestic utilities: N/A
b. Sales to foreign utilities:

I hereby swear or affirm that the information herein provided is true, complete and correct.

Signature Terry J Fletcher Date: 4/25/03

(PLEASE COMPLETE ALL OF THE FOLLOWING LEGIBLY)

Terry Fletcher

Name (please print)
General Manager

Title:

Address: PO Box 218

Grants, NM USA 87020



E-mail: tfletcher@ramc.net

Form 10 (4/03)

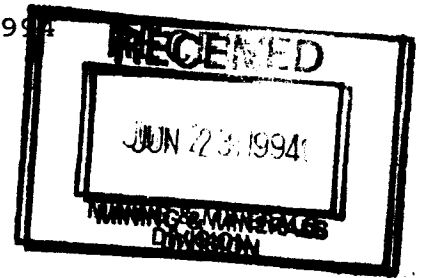
Form 11 (4/03)

SECTION 30W

QUIVIRA MINING COMPANY

POST OFFICE BOX 218 • GRANTS, NEW MEXICO 87020

June 21, 1994



Certified Mail
Return Receipt Requested P 762 964 387

Ms. Kay Hatton, Mine Program Manager
Department of Energy, Minerals and Natural Resources
2040 South Pacheco Street
Santa Fe, NM 87505

Dear Ms. Hatton:

Please find enclosed 8 1/2 X 11 maps depicting the final survey of the underground workings for Quivira Mining Company's mines (Sections 22, 24, 30W, 30, 19, 17, 33, 35 and 36). These maps indicate the present extent of the underground workings.

I have also attached a June 9, 1993, letter from Mr. Art Gebeau to Energy, Minerals and Natural Resources clarifying our position regarding Church Rock I and Church Rock IE as these mines are not owned by Quivira Mining, but rather by Kerr McGee Corporation. Prior to January 1989, Quivira (and its properties at Ambrosia Lake) was a wholly owned subsidiary of Kerr McGee Corporation. In January 1989, Quivira and its Ambrosia Lake properties were purchased from Kerr McGee by Rio Algom Mining Corp. The Church Rock mine I and IE properties were not included in the sale and remained with Kerr McGee. January 1989 to July 1992 Quivira did reclamation work on the Church Rock mines as a contractor on behalf of Kerr McGee, its owner. Commencing in July 1992, Kerr McGee resumed all responsibility for the reclamation and management of the Church Rock mines. As such, Mr. Roy Smith of Kerr McGee, has been notified of your request to provide final closure maps for the Church Rock mines.

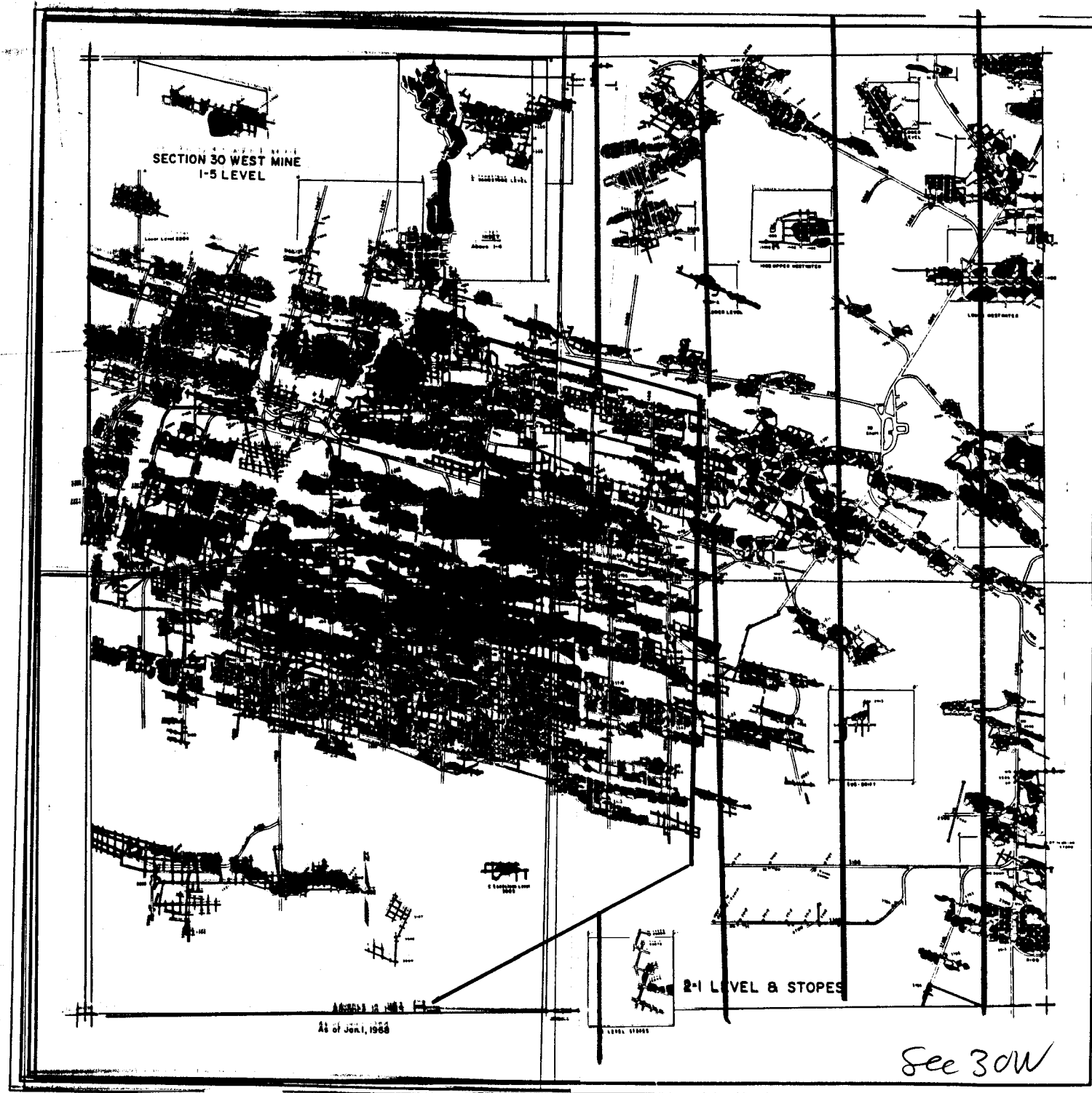
I apologize for the delay in providing this information. As I stated to you in our telephone conversation, much of our resources have been committed to participating in the Mining and Mineral Division proposals to establish hard rock mine regulations in New Mexico. If I can be of further assistance or you need additional information, please contact me at (505) 287-8851, extension 200.

Sincerely,

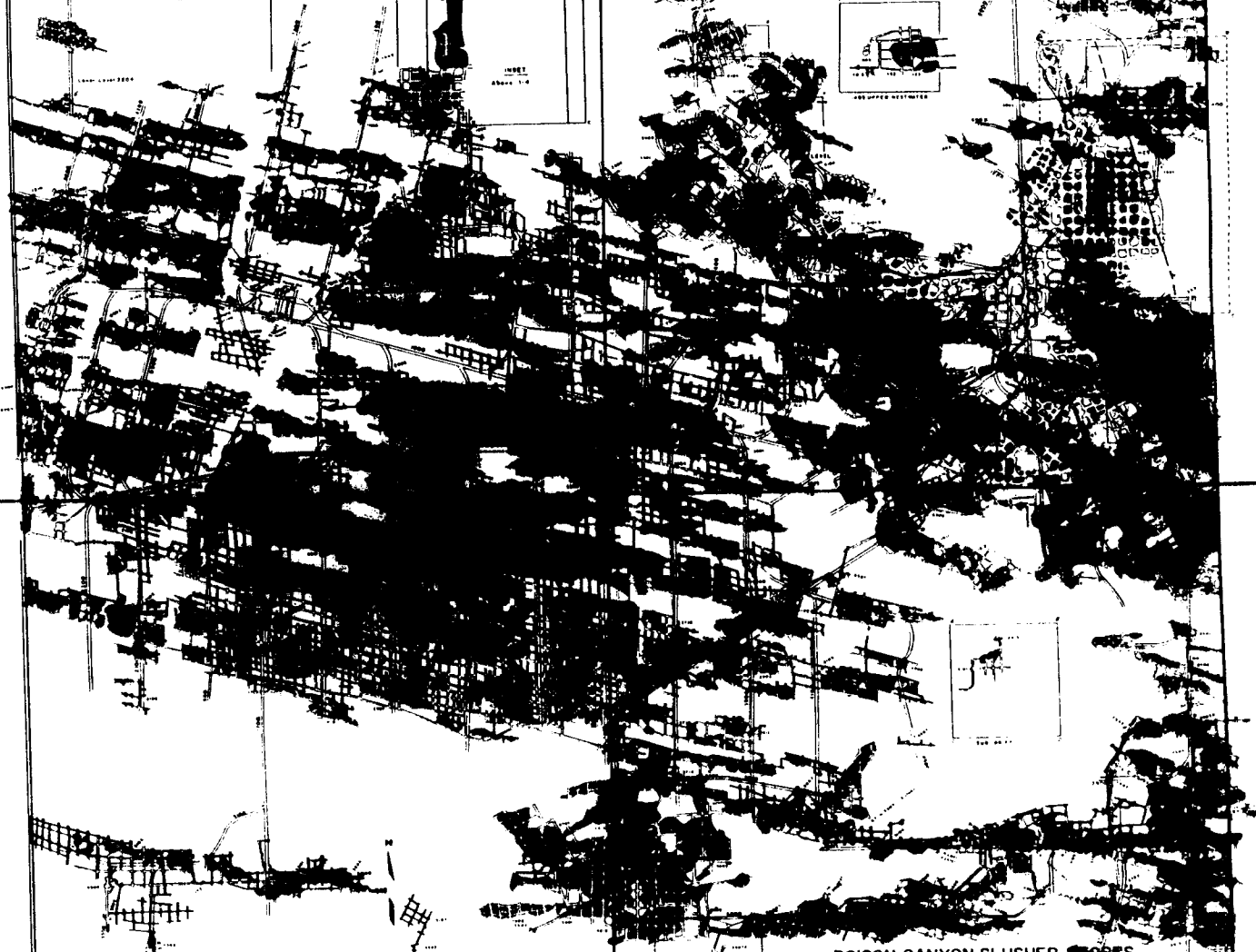
Terry Fletcher
General Manager

Attachments: As stated

xc: B. Ferdinand (RAMC)
M. Freeman (RAMC)
P. Luthiger (Quivira)
R. Smith (Kerr McGee)
file



SECTION 30 WEST MINE
I-5 LEVEL



Advance in 1983 

Advance in 1983 

As of Jan 1, 1968

POISON CANYON SLUSHER STOPES
ABOVE I-5 AS OF JANUARY 1, 1984
2-1 LEVEL & STOPES
I-5 LEVEL & STOPES AS OF JANUARY 1, 1984
I-4 LEVEL & STOPES
'C' LEVEL STOPES

Sec 30 & 30W

ant MK

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
MINING AND MINERALS DIVISION
MINE REGISTRATION AND GEOLOGICAL SERVICES

SAFEGUARDING INSPECTION CHECKLIST

Mine/Company: Sec. 30 W / Quivira
Company phone: 287-8851
Date of inspection: 5/27/93
Name of inspector: KSH
Others present: ant Gebean
Location of mine (legal description or directions to site):

[Handwritten signature]

Check all the following that apply:

Shaft: ☒ Adit: ☐ Pit: ☐ Quarry: ☐ Mill: ☐ Highwall(s): ☐
Pond: ☐ Other: ☐ (Describe):

Commodities produced: ☒

Safeguarding methods used: (describe all that apply) Piles 1:30 or less. Are covering
Slope of pit walls or tailings: area & cut down radiation, most or all bldgs.
Guardrails, fencing, berms or other at highwalls: to be taken down. Future plans
Fencing around property: (types, locks, etc.) are leaching.
Warning signs:
Backfilling of shafts, adits, and auger boreholes: (how far into opening)

Personnel on site: _____ Guards: _____

Temporary closure methods used: (if mine is temporarily suspended)

Openings sealed with steel reinforced concrete or masonry wall:
Shafts sealed with steel reinforced concrete slab or cable net closure:
Wire fence:
Barbed wire (4 strands):
Cable closure:
Heavy rope closure:
Support posts painted fluorescent color:
Other:

Beginning priority classification:

Ending priority classification (to date): 0 - still active as MWR.

Follow up action needed for operator to perform:

Other comments:

Signature of inspector: K. Hatton

Title:

Agency:

Address:

CHECK LIST

NISO date: _____

ROS date: _____

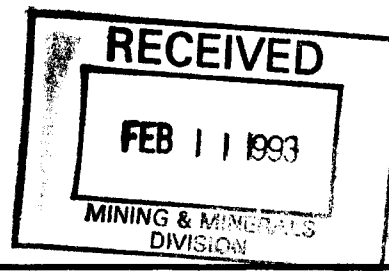
Topo: _____

Reports: _____

Review by MMD Director: Date: _____ Initials: _____



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department



Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195

MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill/Smelter: Section 30 West Mine
Name of Company: Quivira Mining Company Telephone: (505) 287-8851
Address: Box 218, Grants, NM 87020
Manager or Person in Charge and Title (please print): Arthur E. Gebeau, General Manager
Name of Previous Company (if applicable): _____
Location: County McKinley 1/4-1/4 SE/NW Sec. 30 Township 14N Range 9W
Directions to Location if Unsurveyed: _____
USGS Quadrangle Map Name: _____
MSHA Number: 2900541 Start Up Date: 1970

Please list all Standard Industrial Classification (SIC) codes for this operation: _____

MINE TYPE: ☐ Surface ☐ Adit ☐ Heap Leach ☒ Shaft ☐ In Situ Leach

☐ MILL ☐ SMELTER ☐ Other (describe) _____

Minerals or Commodities Produced: Uranium

Minerals or Commodities Processed: _____

Status: ☒ Active ☐ Intermittent ☐ Inactive ☐ Under Development

Capacity: (indicate cu.yds. or tons, and per day, month or year) 800 TPD at peak

Mineral Estate Owner: Name: Quivira Mining Company Hecla Mining Company
Address: Box 218, Grants, NM 6500 Mineral Drive
Telephone: (505) 287-8851 Couder d'Aleone, Idaho 83814
Surface Estate Owner: Name: Quivira Mining Company
Address: (as above)
Telephone: () (same)

Mineral Estate Classification: (Please check)

☐ State ☐ Federal
☐ Indian ☒ Private

I hereby swear or affirm that the information
herein provided is true, complete and correct,
and that all information on this form may be
released.

Arthur E. Gebeau
Signature

Arthur E. Gebeau
Name (please print)

Title: General Manager

Address: (as above)

Date: February 10, 1993



MINE/MILL/SMELTER REGISTRATION

Name of Mine/~~Mill~~/~~Smelter~~: Section 30W Mine
Name of Operator: Quivira Mining Company Telephone: 287-8851
Address: P.O. Box 218, Grants, New Mexico 87020
Name of Previous Operator (if applicable): _____
Location: County McKinley 1/4-1/4 NW/SE Sec. 30 Township 14N Range 9W
Directions to Location if Unsurveyed: _____
USGS Quadrangle Map Name: Ambrosia Lake
MSHA Number: 2900541

Type of Operation: (please check)

MINE:

Surface _____
Shaft X

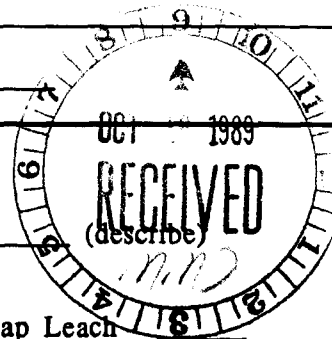
Adit _____
In Situ Leach _____

Other _____

Mill _____

Smelter _____

Heap Leach _____



Mineral or Commodity Produced: Uranium

Mineral Estate Owner: Name Hecla Mining Company
Address 6500 Mineral Drive, Box C-8000, Coeur D'Alene, Idaho
Telephone (208)769-4100 83814-1931

Surface Estate Owner: Name Quivira Mining Company
Address P.O. Box 218, Grants, New Mexico 87020
Telephone 287-8851

Mineral Estate Classification: (Please check)

State _____ Federal _____ Indian _____ Private X

I hereby swear or affirm that the information
herein provided is true, complete and correct.

Signature [Signature]

Title: General Manager

Address: P.O. Box 218
Grants, NM 87020

Date: 10-10-89

DO NOT WRITE IN THIS SPACE

Registration Number Assigned _____
By: _____

Signature _____

Title: _____
Date: _____

Section 32 Mine
Homestake Mining Co. (UNC-Homestake, Homestake-Sapin)
USGS Quad: Ambrosia Lake



*Filed 12/1/91
Found in record file*

DO NOT WRITE IN THIS SPACE

10 ✓

Completed 2/9/91

REPORT OF SAFEGUARDING

Name of Operator: Homestake Mining Company

Address: P.O. Box 98, Grants, NM 87020-0011

Mine Name: Section 32, 14N, 9W MSHA Number N/A

Location: County McKinley 1/4-1/4 3/4 Sec. 32 Township 14N Range 9W

Directions to Location if Unsurveyed: _____

Type of Operation (please check):

Surface Mine _____
Shaft x

Adit _____
Insitu _____

Other _____
Mineral Mined _____

DESCRIPTION OF MATERIALS AND PROCEDURES USED IN COMPLETE SAFEGUARDING: (include quantities of materials)

During mine reclamation all 4 surface boreholes were backfilled with earth and capped by welding 3/4 inch steel plate to the hole casing as is illustrated by the attached schematic drawing of a "typical Borehole Configuration". The mine shaft was backfilled and given 4 years time to compact. The 16 foot by 10 foot shaft was then covered by a 25 ft. x 25 ft. by 3 feet thick (60 yd.³) reinforced concrete cap.

The areas were covered with several feet of topsoil and contoured. Reseeding has begun and will be completed early in 1991.

DATE OF COMPLETION: November, 1990

I hereby swear or affirm that the information herein provided is true, complete and correct.

for F. R. Craft
Signature

Title: F. R. Craft
Resident Manager

Address: P.O. Box 98
Grants, NM 87020-0011

Date: 2/17/91

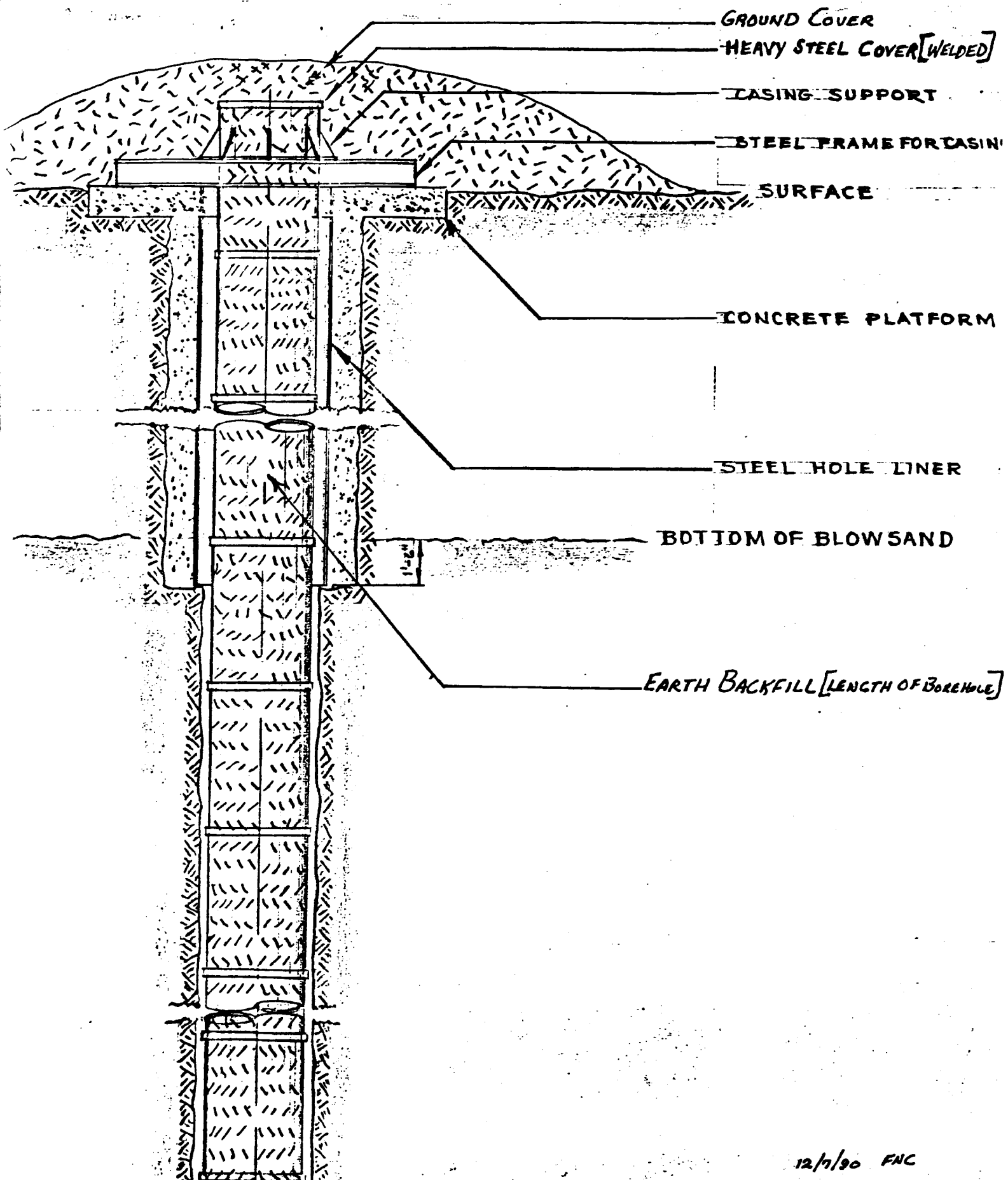


TYPICAL SHAFT CONFIGURATION



HOMESTAKE MINING COMPANY GRANTS DIVISON

TYPICAL BOREHOLE CONFIGURATION



Section 33 Mine
Rio Algom (Quivira Mining, Kerr-McGee, Kermac)
USGS Quad: Ambrosia Lake



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Telephone: (505) 476-3400
FAX No.: (505) 476-3402

FORM 12: NOTICE OF INTENT
TO SUSPEND OPERATIONS

For MMD use only

Ar

Name of Company: Rio Algom Mining LLC
Address: PO Box 218, Grants, NM USA 87020
Name of Operation: Section 33 Mine MSHA Number: 2900776
Location: County McKinley 1/4-1/4 Sec. Section 33 Township T14N Range R9W
Directions to Location if Unsurveyed:
Manager or Person in Charge and Title (please print): Terry Fletcher, General Manager
Address: same as above Telephone: () 505-287-8851
Start Up Date: 1965

Photos and/or videos of the mine site may be filed with this form if desired.

TYPE OF OPERATION: ☐ Surface Mine ☐ Adit ☐ Mill ☐ Other Stope leaching
(please check all that apply) ☐ Shaft ☐ Insitu Mineral Mined or Milled uranium

Check One: ☒ Permanent ☐ Temporary Suspension Date 12/31/2002
☐ Temporary Suspension with responsible person(s) on site at all times

DESCRIPTION OF SAFEGUARDING PROCEDURES, MATERIALS AND FINAL SLOPES, AND TIMETABLE FOR
COMPLETION OF SAFEGUARDING: (Note: Safeguarding guidelines are available upon request from MMD).

All surface shafts and ventilation holes are safeguarded with metal barricades secured on openings. All electrical power sources are disconnected. Access to sites is locked and fenced.

Reclamation of the site will proceed in accordance with the approved closeout plan for the operation as described within mine permit MK009RE.

Signature Terry Fletcher
Name (please print) Terry Fletcher
Title: General Manager
Address: PO Box 218
Grants, NM 87020
Telephone: () 505-287-8851
Date: April 28, 2003

For MMD use only

Approved _____ Disapproved _____

By: _____
Signature

Title: _____

Date: _____



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

ent

RECEIVED

OCT 09 1996

MINING & MINERALS DIV.

Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195

NOTICE OF INTENTION
TO SUSPEND OPERATIONS

For MMD use only

8B

Name of Company: Quivira Mining Co.
Address: PO Box 218 Grants NM 87020
Mine or Mill Name: Section 33 MSHA Number: 2900776
Location: County: Mekinley 1/4-1/4 Sec. 11W2NE Section 33 Township: 14N Range 9W
Directions to Location if Unsurveyed: _____

Photos and/or videos of the mine site may be filed with this form if desired.

Start Up Date: 1959

Type of Operation (please check):

Surface Mine _____ Adit _____ Mill _____ Other _____
Shaft X Insitu _____ Mineral Mined or Milled Uranium

Check One: Permanent _____ Temporary X Suspension Date 4/30/92
Temporary Suspension with responsible person(s) on site at all times _____

DESCRIPTION OF SAFEGUARDING PROCEDURES, MATERIALS AND FINAL SLOPES, AND TIMETABLE FOR
COMPLETION OF SAFEGUARDING: (Note: Safeguarding guidelines are available upon request from MMD).

**Refers to Mining Act.
This approval does not reflect approval of requirements under the Mining Act.*
Shaft is covered with 1/2" steel plate welded in place. Mine site is fenced behind locked gate. Vent holes are covered with steel plate or expanded metal welded or bolted in place. (Prior reclamation of the site has been completed.)
Security 24 hr provided at Mill site and general office location.

Terry L Fletcher
Signature

Terry L Fletcher
Name (please print)

Title: General Manager

Address: PO Box 218 Grants NM 87020

Telephone: () 505 267 8851

Date signed: 10/7/96

For MMD use only

Approved ✓ * Disapproved _____

By: [Signature] *
Signature

Title: Division Director

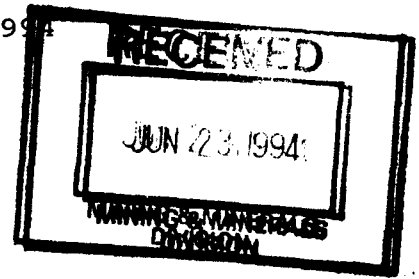
Date: 11/30/96

SECTION 33

QUIVIRA MINING COMPANY

POST OFFICE BOX 218 • GRANTS, NEW MEXICO 87020

June 21, 1994



Certified Mail
Return Receipt Requested P 762 964 387

Ms. Kay Hatton, Mine Program Manager
Department of Energy, Minerals and Natural Resources
2040 South Pacheco Street
Santa Fe, NM 87505

Dear Ms. Hatton:

Please find enclosed 8 1/2 X 11 maps depicting the final survey of the underground workings for Quivira Mining Company's mines (Sections 22, 24, 30W, 30, 19, 17, 33, 35 and 36). These maps indicate the present extent of the underground workings.

I have also attached a June 9, 1993, letter from Mr. Art Gebeau to Energy, Minerals and Natural Resources clarifying our position regarding Church Rock I and Church Rock IE as these mines are not owned by Quivira Mining, but rather by Kerr McGee Corporation. Prior to January 1989, Quivira (and its properties at Ambrosia Lake) was a wholly owned subsidiary of Kerr McGee Corporation. In January 1989, Quivira and its Ambrosia Lake properties were purchased from Kerr McGee by Rio Algom Mining Corp. The Church Rock mine I and IE properties were not included in the sale and remained with Kerr McGee. January 1989 to July 1992 Quivira did reclamation work on the Church Rock mines as a contractor on behalf of Kerr McGee, its owner. Commencing in July 1992, Kerr McGee resumed all responsibility for the reclamation and management of the Church Rock mines. As such, Mr. Roy Smith of Kerr McGee, has been notified of your request to provide final closure maps for the Church Rock mines.

I apologize for the delay in providing this information. As I stated to you in our telephone conversation, much of our resources have been committed to participating in the Mining and Mineral Division proposals to establish hard rock mine regulations in New Mexico. If I can be of further assistance or you need additional information, please contact me at (505) 287-8851, extension 200.

Sincerely,

Terry Fletcher
General Manager

Attachments: As stated

xc: B. Ferdinand (RAMC)
M. Freeman (RAMC)
P. Luthiger (Quivira)
R. Smith (Kerr McGee)
file

— Advance in 1974
As of January 1, 1975
No ■ Advance in 1974
■ Advance in 1974
No ■ Advance in 1974
As of January 1, 1975

200 0 200 400 600 800
Scale in Feet

"A" LEVEL STOPES
"B" LEVEL STOPES
1-4 LEVEL HAULAGE
1-5 LEVEL HAULAGE
"C" LEVEL STOPES

KERR-McGEE CORPORATION
GRANTS URANIUM OPERATIONS
Section 33, T14N, R9W

See 33

ent MK

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
MINING AND MINERALS DIVISION
MINE REGISTRATION AND GEOLOGICAL SERVICES

SAFEGUARDING INSPECTION CHECKLIST

Mine/Company: Sec. 33 / Quivira

Company phone: 287-8851

Date of inspection: 5/27/93

Name of inspector: KSH

Others present: Art O'Hean

Location of mine (legal description or directions to site): NE/14N 33/14N/9W

Check all the following that apply:

Shaft: ☒ Adit: ☐ Pit: ☐ Quarry: ☐ Mill: ☐ Highwall(s): ☐

Pond: ☐ Other: ☐ (Describe):

Commodities produced: Ur

Safeguarding methods used: (describe all that apply)

Slope of pit walls or tailings: Gentle slopes - Covered to reduce radiation.

Guardrails, fencing, berms or other at highwalls:

Fencing around property: (types, locks, etc.)

Warning signs:

Backfilling of shafts, adits, and auger boreholes: (how far into opening) Shaft has welded steel cap.

Personnel on site: _____ Guards: _____

Temporary closure methods used: (if mine is temporarily suspended)

Openings sealed with steel reinforced concrete or masonry wall:

Shafts sealed with steel reinforced concrete slab or cable net closure:

Wire fence:

Barbed wire (4 strands):

Cable closure:

Heavy rope closure:

Support posts painted fluorescent color:

Other:

Beginning priority classification:

Ending priority classification (to date): 0 - still pumping intermittently. (MWR)

Follow up action needed for operator to perform: Need NISO submitted.

Other comments: See photo #10.

Signature of inspector:

Title:

Agency:

Address:

Review by MMD Director: Date: _____ Initials: _____

CHECK LIST

NISO date: _____

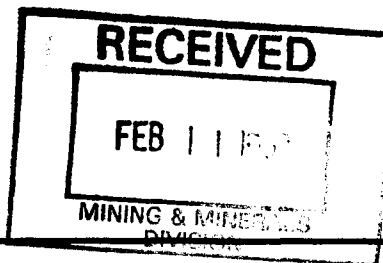
ROS date: _____

Topo: _____

Reports: _____



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department



Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195

MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill/Smelter: Section 33 Mine
Name of Company: Quivira Mining Company Telephone: (505) 287-8851
Address: Box 218, Grants, NM 87020
Manager or Person in Charge and Title (please print): Arthur E. Gebeau, General Manager
Name of Previous Company (if applicable): _____
Location: County McKinley 1/4-1/4 NW/NE Sec. 33 Township 14N Range 9W
Directions to Location if Unsurveyed: _____
USGS Quadrangle Map Name: _____
MSHA Number: 2900541 Start Up Date: 1959

Please list all Standard Industrial Classification (SIC) codes for this operation: _____ , _____

MINE TYPE: ☐ Surface ☐ Adit ☐ Heap Leach ☒ Shaft ☐ In Situ Leach

☐ MILL ☐ SMELTER ☐ Other (describe) _____

Minerals or Commodities Produced: Uranium

Minerals or Commodities Processed: _____

Status: ☐ Active ☒ Intermittent ☐ Inactive ☐ Under Development

Capacity: (indicate cu.yds. or tons, and per day, month or year) 750 TPD at peak

Mineral Estate Owner: Name: Quivira Mining Company
Address: Box 218, Grants, NM 87020
Telephone: (505) 287-8851

Surface Estate Owner: Name: (same)
Address: (same)
Telephone: () (same)

Mineral Estate Classification: (Please check)

☐ State ☐ Federal
☐ Indian ☒ Private

I hereby swear or affirm that the information
herein provided is true, complete and correct,
and that all information on this form may be
released.

Arthur E. Gebeau
Signature

Arthur E. Gebeau
Name (please print)

Title: General Manager

Address: (as above)

Date: February 10, 1993

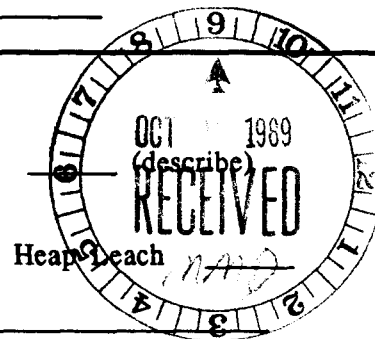


MINE/MILL/SMELTER REGISTRATION

Name of Mine/~~Mill/Smelter~~ Section 33 Mine
Name of Operator: Quivira Mining Company Telephone: 287-8851
Address: P.O. Box 218, Grants, New Mexico 87020
Name of Previous Operator (if applicable): _____
Location: County McKinley 1/4-1/4 NE/NW Sec. 33 Township 14N Range 9W
Directions to Location if Unsurveyed: _____
USGS Quadrangle Map Name: Ambrosia Lake
MSHA Number: 2900541

Type of Operation: (please check)

MINE: Surface _____ Adit _____ Other _____
Shaft X In Situ Leach _____
Mill _____ Smelter _____



Mineral or Commodity Produced: Uranium

Mineral Estate Owner: Name Quivira Mining Company
Address P.O. Box 218, Grants, NM 87020
Telephone 287-8851
Surface Estate Owner: Name Quivira Mining Company
Address P.O. Box 218, Grants, NM 87020
Telephone 287-8851

Mineral Estate Classification: (Please check)

State _____ Federal _____ Indian _____ Private X

I hereby swear or affirm that the information
herein provided is true, complete and correct.

[Signature]
Signature

Title: General Manager
Address: P.O. Box 218
Grants, NM 87020

Date: 10-10-89

DO NOT WRITE IN THIS SPACE

Registration Number Assigned _____
By: _____

Signature

Title: _____
Date: _____

Section 35 Mine
Rio Algom (Quivira Mining, Kerr-McGee, Kermac)
USGS Quad: Ambrosia Lake



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Telephone: (505) 476-3400
FAX No.: (505) 476-3402

**FORM 12: NOTICE OF INTENT
TO SUSPEND OPERATIONS**

For MMD use only

[Handwritten signature]

Name of Company: Rio Algom Mining LLC
Address: PO Box 218, Grants, NM USA 87020
Name of Operation: Section 35 Mine MSHA Number: 2900776
Location: County McKinley 1/4-1/4 Sec. 35 Township T14N Range R9W
Directions to Location if Unsurveyed: _____
Manager or Person in Charge and Title (please print): Terry Fletcher, General Manager
Address: same as above Telephone: () 505-287-8851
Start Up Date: 1971

Photos and/or videos of the mine site may be filed with this form if desired.

TYPE OF OPERATION: ☐ Surface Mine ☐ Adit ☐ Mill ☐ Other Stope leaching
(please check all that apply) ☐ Shaft ☐ Insitu Mineral Mined or Milled uranium

Check One: ☒ Permanent ☐ Temporary Suspension Date 12/31/2002
☐ Temporary Suspension with responsible person(s) on site at all times

DESCRIPTION OF SAFEGUARDING PROCEDURES, MATERIALS AND FINAL SLOPES, AND TIMETABLE FOR COMPLETION OF SAFEGUARDING: (Note: Safeguarding guidelines are available upon request from MMD).

All surface shafts and ventilation holes are safeguarded with metal barricades secured on openings. All electrical power sources are disconnected. Access to sites is locked and fenced.
Reclamation of the site will proceed in accordance with the approved closeout plan for the operation as described within mine permit MK009RE.

Terry I Fletcher
Signature
Terry Fletcher
Name (please print)
Title: General Manager
Address: PO Box 218
Grants, NM 87020
Telephone: () 505-287-8851
Date: April 28, 2003

For MMD use only

Approved _____ Disapproved _____

By: _____
Signature

Title: _____

Date: _____



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Telephone: (505) 476-3400
FAX No.: (505) 476-3402

FORM 11: ANNUAL REPORT
OF
URANIUM MINING OPERATIONS

11
Section 35 Mine
Quivira Mining Co.

Ar

An annual report is to be filed for each calendar year period from January 1 through December 31. Reports are to be received by the Mining and Minerals Division **before April 30** of the following year. **Please submit a separate form for each operation.** Data in this report covers calendar year **2002**. Forms can also be found at www.emnrd.state.nm.us/mining/map/mapforms.htm.

Name of Company: Rio Algom Mining LLC
Address: PO Box 218, Grants, NM USA 87020
Mine Name: Section 35 Mine MSHA Number: 2900776
Location: County mCkinley 1/4-1/4 Sec. Section 35 Township T14N Range R9W
Directions to Location if Unsurveyed: _____
Manager or Person in Charge and Title (please print): Terry Fletcher, General Manager
Address: same as above Telephone: () _____
Start Up Date: 1971

1. Was there a change in mine name, owner or operating company during the reporting year?

☒ Yes

☐ No

If yes, give date of change: 2 / 12 / 02
(month / day / year)

Nature of Change: Changed to a limited liability corporation

2. If a subsidiary of a larger company, provide the following information:

Name of Parent Company: Rio Algom Mining LLC

Address: 6305 Waterford Blvd., Ste. 325, Oklahoma City, OK 73118

Telephone: () _____

3. Type of Operation:

☐

Underground Conventional

☐

Insitu Leach

☒

Underground Water Recovery

☐

Surface Mine

☐

Other _____

4. Mine Employment Information

a. Average number of direct employees: Underground 3 Surface 3 Other 3 **Total direct** 3

b. Total number of days of operation:

c. Total yearly payroll:

\$ 100,000

d. Full time employees in **reclamation** (include in Total direct)

3 (all mines)

e. Average number of **contract** employees, haulers, etc. (do not include in total direct):

5. Description and Value of Improvements Made During Year

a. Power Plant:

\$ _____

b. New Structure(s):

\$ _____

c. Existing Structure(s):

\$ _____

d. Equipment:

\$ _____

e. Other (specify):

\$ _____

TOTAL: \$ 0

6. Percent Production by Mineral Estate Classification:

Federal	_____	Private	100%
State	_____	Indian (Reservation)	_____
		Indian (Non-Reservation)	_____

7. Production, Recovery and Value During year

a. Annual Production:

Ore mined (ST) _____
Ore milled (ST) _____
FOB mine value (\$) _____
Contained U_3O_8 (Lbs.) _____

b. End of Year Inventory:

Ore on hand at beginning of reporting year (ST) _____
Ore on hand at close of reporting year (ST) _____

c. Depth of production (ft.): _____

d. Annual U_3O_8 recovery (Lbs.):

From ore _____
From mine water (stope leaching) 0
From insitu leach _____

e. Net recovery credited to this mine (Lbs. U_3O_8): _____

f. Unit value of recovered U_3O_8 (\$/Lb.): _____

g. Total sales value (\$/Lb.): _____

h. Mine water production (de-watering) (GPD): 0

i. Capacity: 0

8. Size of Operation in Acres: 640

Acreage Disturbed to Date: 40
Acreage Reclaimed to Date: 30

9. End of Year Summary: (Events, expansion/improvement, closures, markets, issues, suggested State action)

10. Voluntary Information: Voluntary responses to the following questions would be helpful to the Department.

a. Sales to domestic utilities: N/A
b. Sales to foreign utilities _____

I hereby swear or affirm that the information herein provided is true, complete and correct.

Signature

Terry Fletcher

Date: 4/25/03

(PLEASE COMPLETE ALL OF THE FOLLOWING LEGIBLY)

Terry Fletcher

Name (please print)

General Manager

Title:

Address: PO Box 218

Grants, NM USA 87020

E-mail: tfletcher@ramc.net

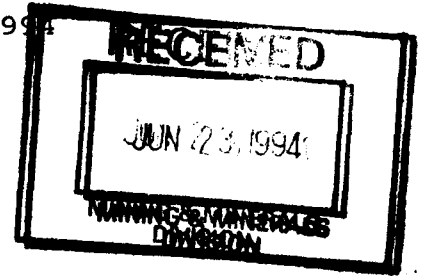


SECTION 35

QUIVIRA MINING COMPANY

POST OFFICE BOX 218 • GRANTS, NEW MEXICO 87020

June 21, 1994



Certified Mail
Return Receipt Requested P 762 964 387

Ms. Kay Hatton, Mine Program Manager
Department of Energy, Minerals and Natural Resources
2040 South Pacheco Street
Santa Fe, NM 87505

Dear Ms. Hatton:

Please find enclosed 8 1/2 X 11 maps depicting the final survey of the underground workings for Quivira Mining Company's mines (Sections 22, 24, 30W, 30, 19, 17, 33, 35 and 36). These maps indicate the present extent of the underground workings.

I have also attached a June 9, 1993, letter from Mr. Art Gebeau to Energy, Minerals and Natural Resources clarifying our position regarding Church Rock I and Church Rock IE as these mines are not owned by Quivira Mining, but rather by Kerr McGee Corporation. Prior to January 1989, Quivira (and its properties at Ambrosia Lake) was a wholly owned subsidiary of Kerr McGee Corporation. In January 1989, Quivira and its Ambrosia Lake properties were purchased from Kerr McGee by Rio Algom Mining Corp. The Church Rock mine I and IE properties were not included in the sale and remained with Kerr McGee. January 1989 to July 1992 Quivira did reclamation work on the Church Rock mines as a contractor on behalf of Kerr McGee, its owner. Commencing in July 1992, Kerr McGee resumed all responsibility for the reclamation and management of the Church Rock mines. As such, Mr. Roy Smith of Kerr McGee, has been notified of your request to provide final closure maps for the Church Rock mines.

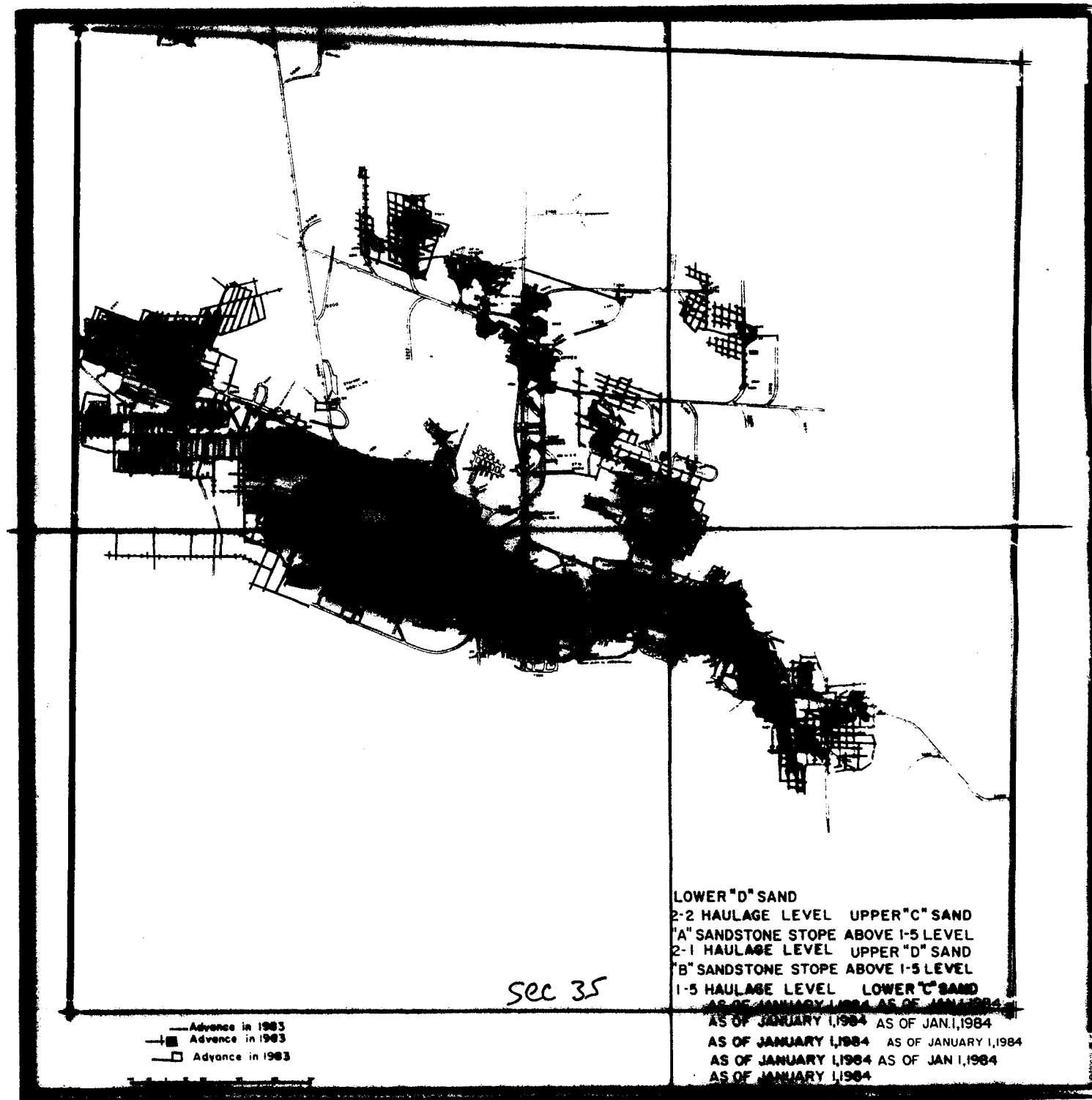
I apologize for the delay in providing this information. As I stated to you in our telephone conversation, much of our resources have been committed to participating in the Mining and Mineral Division proposals to establish hard rock mine regulations in New Mexico. If I can be of further assistance or you need additional information, please contact me at (505) 287-8851, extension 200.

Sincerely,

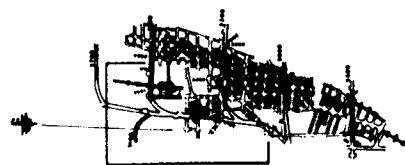
Terry Fletcher
General Manager

Attachments: As stated

xc: B. Ferdinand (RAMC)
M. Freeman (RAMC)
P. Luthiger (Quivira)
R. Smith (Kerr McGee)
file



SECTION 26

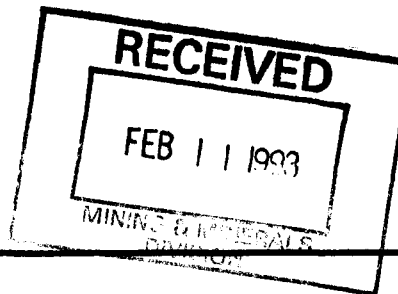


Advance in 1983 —
 Advance in 1983 —
 STOPE LEVEL AS OF JANUARY 1, 1984
 HAULAGE LEVEL AS OF JANUARY 1, 1984

sec 26



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department



Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5970
FAX No.: (505) 827-7195

MINE/MILL/SMELTER REGISTRATION

Name of Mine/Mill/Smelter: Section 35 Mine
Name of Company: Quivira Mining Company Telephone: (505) 287-8851
Address: Box 218, Grants, NM 87020
Manager or Person in Charge and Title (please print): Arthur E. Gebeau, General Manager
Name of Previous Company (if applicable): _____
Location: County McKinley 1/4-1/4 SE/NW Sec. 35 Township 14N Range 9W
Directions to Location if Unsurveyed: _____
USGS Quadrangle Map Name: _____
MSHA Number: 2900541 Start Up Date: 1971

Please list all Standard Industrial Classification (SIC) codes for this operation: _____

MINE TYPE: ☐ Surface ☐ Adit ☐ Heap Leach ☒ Shaft ☐ In Situ Leach

☐ MILL ☐ SMELTER ☐ Other (describe) _____

Minerals or Commodities Produced: Uranium

Minerals or Commodities Processed: _____

Status: ☐ Active ☐ Intermittent ☒ Inactive ☐ Under Development

Capacity: (indicate cu.yds. or tons, and per day, month or year) 1000TPD at peak

Mineral Estate Owner: Name: Quivira Mining Company

Address: Box 218, Grants, NM 87020

Telephone: (505) 287-8851

Surface Estate Owner: Name: (same)

Address: (same)

Telephone: () (same)

Mineral Estate Classification: (Please check)

☐ State ☐ Federal
☐ Indian ☒ Private

I hereby swear or affirm that the information
herein provided is true, complete and correct,
and that all information on this form may be
released.

Arthur E. Gebeau
Signature

Arthur E. Gebeau
Name (please print)

Title: General Manager

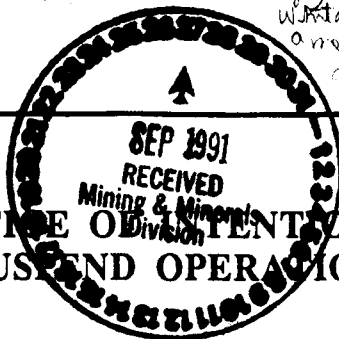
Address: (as above)

Date: February 10, 1993



STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

Mining and Minerals Division
525 Camino de los Marquez
Santa Fe, NM 87503



NOTICE OF INTENTION
TO SUSPEND OPERATIONS

DO NOT WRITE IN THIS SPACE

8B ✓

Name of Operator: Quivira Mining Company
Address: P.O. Box 218, Grants, New Mexico 87020
Mine Name: Section 35 Mine MSHA Number: 2900541

Location: County McKinley 1/4-1/4 NW/SE Sec. 35 Township 14N Range 9W
Directions to Location if Unsurveyed: _____

Type of Operation (please check):

Surface Mine _____ Adit _____ Other _____
Shaft X Insitu _____ Mineral Mined _____

Check One: Permanent _____ Temporary X

DESCRIPTION OF MATERIALS AND SAFEGUARDING PROCEDURES:

1. The shaft is protected with closed steel doors over the opening and a locked gate to prevent entry.
2. Ventilation holes are either capped with 1/2" steel plate or contain ventilation equipment that prohibits entry to the opening.
3. Mine buildings are locked.
4. Main road to the facility contains a locked gate.

Signed by: _____
Title: General Manager
Address: P.O. Box 218
Grants, New Mexico 87020
Telephone: 287-8851, ext. 201

DO NOT WRITE IN THIS SPACE

Approved: _____
By: [Signature]
Title: Director
Date: 9-30-91

Quivira Mining Company

September 24, 1991

Ms. Rhea L. Graham, Director
Mining and Minerals Division
Energy, Mineral and Natural Resources Department
2040 South Pacheco
Santa Fe, New Mexico 87505

Dear Ms. Graham:

Please find attached a "Notice of Intention To Suspend Operations" for Quivira Mining Company's (QMC) Section 35 Mine. QMC plans to keep this facility on standby status until there is improvement in the uranium market. Substantial uranium resource remains in this property.

Please contact me at 287-8851, Ext. 201 if you have any questions concerning this matter.

Sincerely,



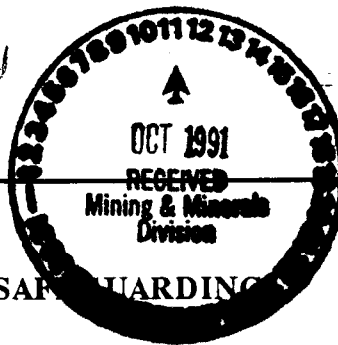
H.E. Whitacre
General Manager





STATE OF NEW MEXICO
Energy, Minerals and
Natural Resources Department

entered



Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, NM 87505
Telephone: (505) 827-5923
FAX No.: (505) 827-7195

DO NOT WRITE IN THIS SPACE

REPORT OF SAFEGUARDING

Name of Company: Quivira Mining Company
Address: P.O. Box 218, Grants, New Mexico 87020
Mine or Mill Name: Section 35 Mine MSHA Number 2900541
Location: County McKinley 1/4-1/4 NW/SE Sec. 35 Township 14N Range 9W
Directions to Location if Unsurveyed: _____

Type of Operation (please check):

Mineral Mined or Milled _____

Surface Mine _____

Shaft _____

Adit _____

Insitu _____

Temporary Suspension Date September 19, 1991

Mill _____

Other _____

DESCRIPTION OF MATERIALS AND PROCEDURES USED IN COMPLETED SAFEGUARDING: (include quantities of materials)

1. The shaft is protected from entry by closed steel doors constructed of 1/4" steel plate reinforced with 3"x3" angle iron located at the subcollar approximately 5' below the surface pad. In addition, the shaft collar is protected from entry by a 6' expanded metal fence and locked gate.
2. Ventilation holes are either capped with 1/2" steel plate or contain ventilation equipment which prohibits entry to the opening.
3. Mine buildings are locked
4. Main road to the facility contains a locked gate

DATE OF COMPLETION: Sept. 20, 1991

I hereby swear or affirm that the information herein provided is true, complete and correct.

H.E. Whitacre
Signature

H.E. Whitacre
Name (please print)

Title: General Manager

Address: P.O. Box 218
Grants, New Mexico 87020

Date: 10-10-91

NOTE: Safeguarding guidelines are available upon request from MMD.

Quivira Mining Company

October 10, 1991

*Key, pls. file
Hanks, Rhea*

Ms. Rhea L. Graham, Director
Energy, Minerals and Natural Resources Department
Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Dear Ms. Graham:

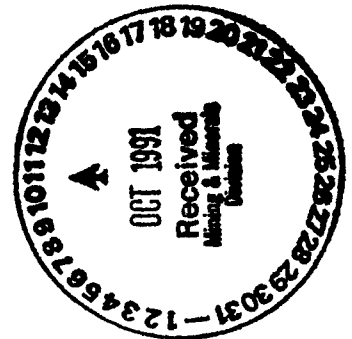
Please find attached a "Report of Safeguarding" for Quivira Mining Company's Section 35 Mine. Operations at this facility were temporarily suspended on September 19, 1991, because of the soft uranium market. Substantial uranium resource remains in this property.

Please contact me at 287-8851, Ext. 201 if you have any questions concerning this matter.

Sincerely,

H.E. Whitacre

H.E. Whitacre
General Manager





MINE/MILL/SMELTER REGISTRATION

Name of Mine/~~MILL/SMELTER~~: Section 35 Mine

Name of Operator: Quivira Mining Company Telephone: 287-8851

Address: P.O. Box 218, Grants, New Mexico 87020

Name of Previous Operator (if applicable): _____

Location: County McKinley 1/4-1/4 NW/SE Sec. 35 Township 14N Range 9W

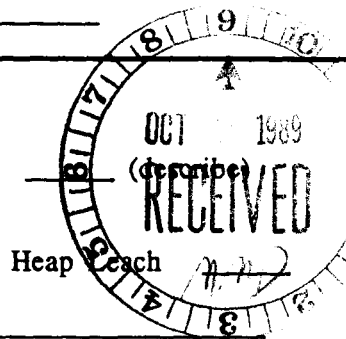
Directions to Location if Unsurveyed: _____

USGS Quadrangle Map Name: Ambrosia Lake

MSHA Number: 2900541

Type of Operation: (please check)

MINE: Surface _____ Adit _____ Other _____
Shaft X In Situ Leach _____
Mill _____ Smelter _____



Mineral or Commodity Produced: Uranium

Mineral Estate Owner: Name Quivira Mining Company
Address P.O. Box 218, Grants, NM 87020
Telephone 287-8851

Surface Estate Owner: Name Quivira Mining Company
Address P.O. Box 218, Grants, NM 87020
Telephone 287-8851

Mineral Estate Classification: (Please check)

State _____ Federal _____ Indian _____ Private X

I hereby swear or affirm that the information
herein provided is true, complete and correct.

[Signature]
Signature

Title: General Manager
Address: P.O. Box 218
Grants, NM 87020

Date: 10-10-89

DO NOT WRITE IN THIS SPACE

Registration Number Assigned _____
By: _____

Signature

Title: _____
Date: _____

Section 36 Mine (Ike, Elizabeth)
Rio Algom (Quivira Mining, Kerr-McGee, Kermac)
USGS Quad: Ambrosia Lake

SECTION 36

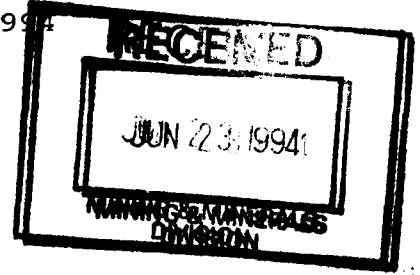
ent

QUIVIRA MINING COMPANY

POST OFFICE BOX 218 • GRANTS, NEW MEXICO 87020

June 21, 1994

Certified Mail
Return Receipt Requested P 762 964 387



Ms. Kay Hatton, Mine Program Manager
Department of Energy, Minerals and Natural Resources
2040 South Pacheco Street
Santa Fe, NM 87505

Dear Ms. Hatton:

Please find enclosed 8 1/2 X 11 maps depicting the final survey of the underground workings for Quivira Mining Company's mines (Sections 22, 24, 30W, 30, 19, 17, 33, 35 and 36). These maps indicate the present extent of the underground workings.

I have also attached a June 9, 1993, letter from Mr. Art Gebeau to Energy, Minerals and Natural Resources clarifying our position regarding Church Rock I and Church Rock IE as these mines are not owned by Quivira Mining, but rather by Kerr McGee Corporation. Prior to January 1989, Quivira (and its properties at Ambrosia Lake) was a wholly owned subsidiary of Kerr McGee Corporation. In January 1989, Quivira and its Ambrosia Lake properties were purchased from Kerr McGee by Rio Algom Mining Corp. The Church Rock mine I and IE properties were not included in the sale and remained with Kerr McGee. January 1989 to July 1992 Quivira did reclamation work on the Church Rock mines as a contractor on behalf of Kerr McGee, its owner. Commencing in July 1992, Kerr McGee resumed all responsibility for the reclamation and management of the Church Rock mines. As such, Mr. Roy Smith of Kerr McGee, has been notified of your request to provide final closure maps for the Church Rock mines.

I apologize for the delay in providing this information. As I stated to you in our telephone conversation, much of our resources have been committed to participating in the Mining and Mineral Division proposals to establish hard rock mine regulations in New Mexico. If I can be of further assistance or you need additional information, please contact me at (505) 287-8851, extension 200.

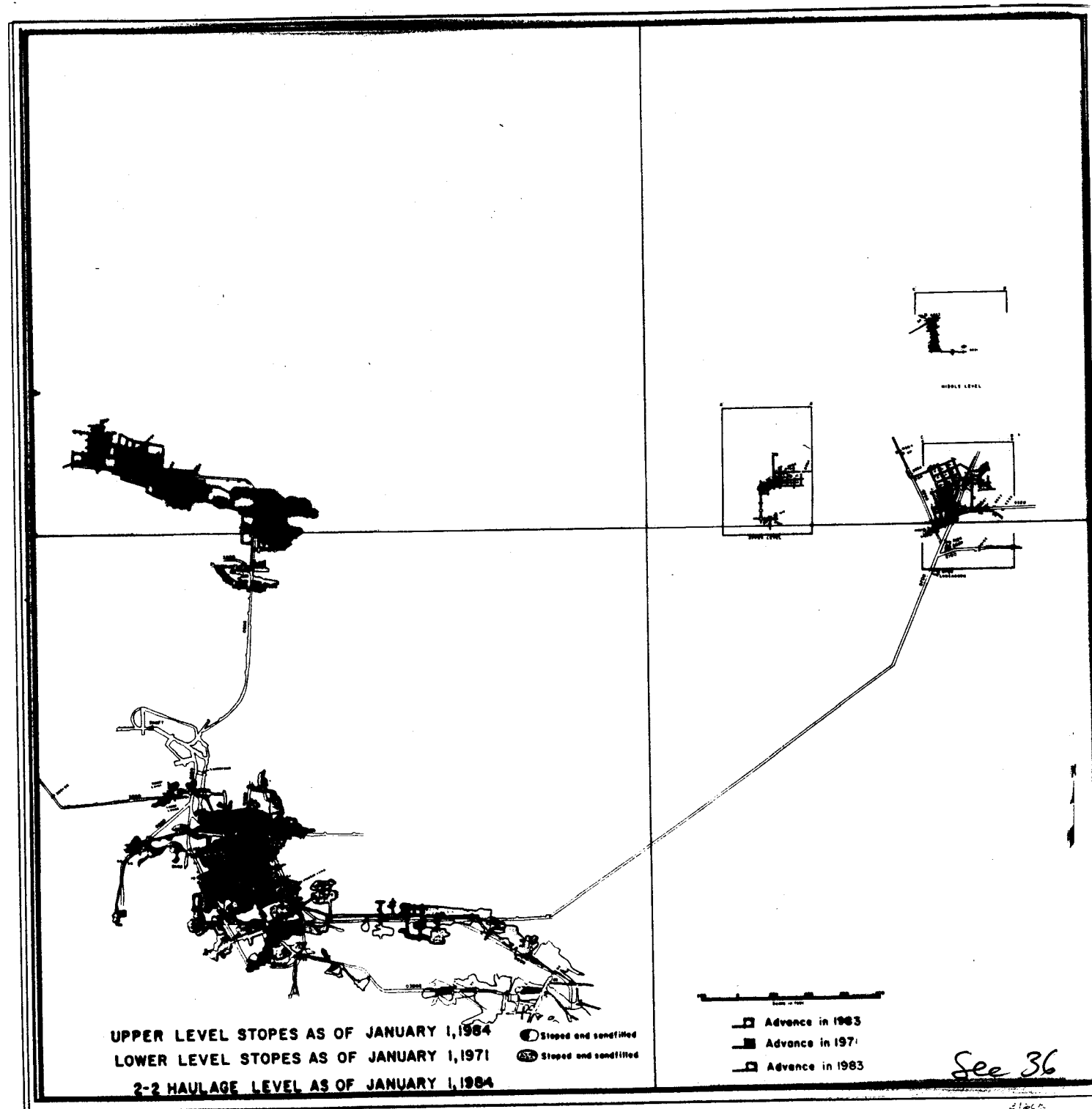
Sincerely,

Terry Fletcher
General Manager

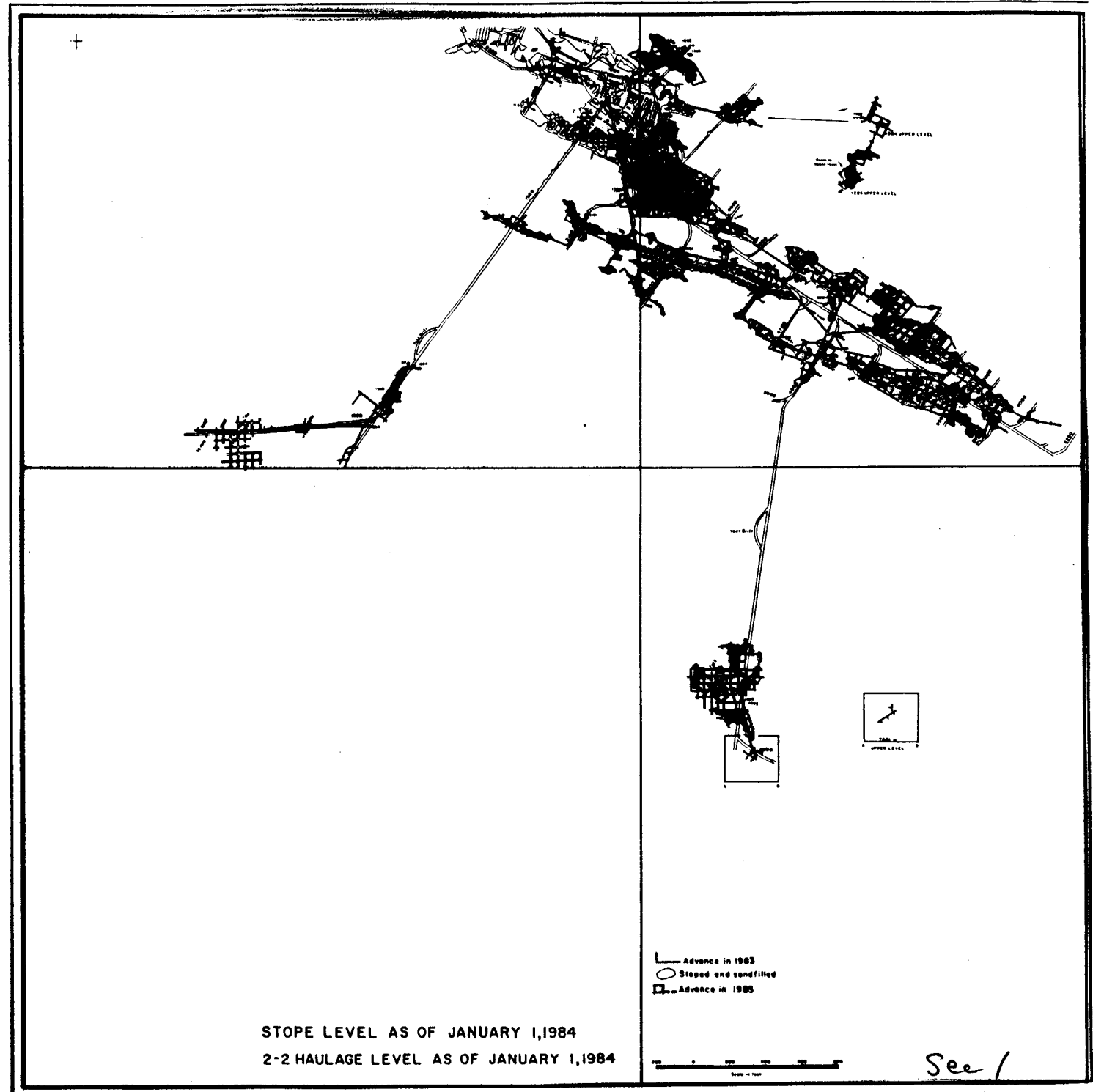
Attachments: As stated

xc: B. Ferdinand (RAMC)
M. Freeman (RAMC)
P. Luthiger (Quivira)
R. Smith (Kerr McGee)
file

Section 36



Section 1



State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

MINING AND MINERALS DIVISION

CONFIRMATION/REPORT OF TELEPHONE CONVERSATION

TO	Name	Hal Whitacre	FROM	Name	Kay Hatton
	Office	Quinn Mining Co.		Office	MRGS
	Location	Granite, NM		Location	2040 S. Pacheco, Santa Fe
	Telephone Number	(505) 287-8851		Telephone Number	(505) 827-5970

Purpose of Call:

Safeguarding Update - Section 36 mine
This mine was inspected by K. Hatton on 7/19/91. All areas in field.
"Seeding of the disturbed areas took place in 1991."

Explanatory Remarks:

8/17/92

Date

K. Hatton

Signature



center

DO NOT WRITE IN THIS SPACE

6B ✓ 10 ✓

inspected 7/19/91
caldata ✓

NOTICE OF INTENTION TO SUSPEND OPERATIONS

Name of Operator: Quivira Mining Company
Address: P.O. Box 218, Grants, NM 87020
Mine Name: Section 36 Mine MSHA Number: 2900541

Location: County McKinley 1/4-1/4 SW/NE Sec. 36 Township 14N Range 9W
Directions to Location if Unsurveyed: _____

Type of Operation (please check):

Surface Mine _____ Adit _____ Other _____
Shaft X Insitu _____ Mineral Mined _____

Check One: Permanent X Temporary _____

DESCRIPTION OF MATERIALS AND SAFEGUARDING PROCEDURES:

1. All mining equipment and supplies have been removed from the property.
2. All buildings have been removed from the property.
3. The shaft and ventilation holes were permanently sealed with four feet of re-inforced concrete and covered with alluvium.
4. A capped 14" pipe was intalled in the shaft and ventilation hole #1 for future leaching operations.
5. Seeding of the disturbed areas is planned for May and June, 1991.



Signed by: *D. E. Whitacre*
Title: General Manager

Address: P.O. Box 218
Grants, NM 87020
Telephone: (505) 287-8851

DO NOT WRITE IN THIS SPACE

Approved _____

By: _____

Signature

Title: _____

Date: _____

Quivira Mining Company

May 22, 1991


State of New Mexico
Energy, Minerals and Natural Resources Department
Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
Attn: Ms. Carol Leach
Acting Director

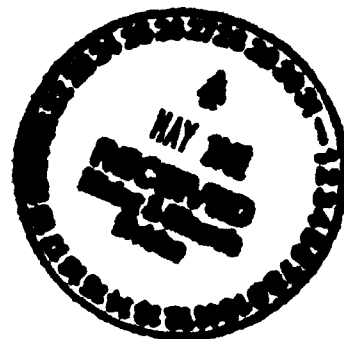
Dear Ms. Leach:

Please find attached "Notice of Intention To Suspend Operations" for Quivira Mining Company's Section 36, Church Rock I and Church Rock IE Mines. As we discussed in our telephone conversation this morning, reclamation of the Section 36 Mine site has essentially been completed and is on going at the Church Rock properties.

Please contact me at 287-8851, Ext. 201, if you have any questions concerning this matter. I would also like to invite you and members of your staff to visit our Ambrosia Lake operation. We are presently reclaiming the largest uranium mill tailings pile in the United States.

Sincerely,


H.E. Whitacre
General Manager





MINE/MILL/SMELTER REGISTRATION

Name of Mine/~~Mill~~/~~Smelter~~ Section 36 Mine

Name of Operator: Quivira Mining Company Telephone: 287-8851

Address: P.O. Box 218, Grants, New Mexico 87020

Name of Previous Operator (if applicable): _____

Location: County McKinley 1/4-1/4 SW/NE Sec. 36 Township 14N Range 9W

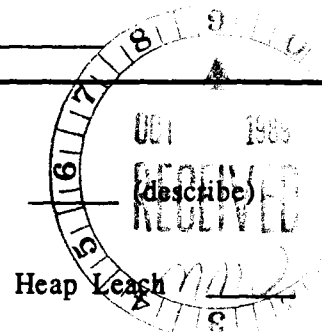
Directions to Location if Unsurveyed: _____

USGS Quadrangle Map Name: Ambrosia Lake

MSHA Number: 2900541

Type of Operation: (please check)

MINE: Surface _____ Adit _____ Other _____
Shaft X In Situ Leach _____
Mill _____ Smelter _____



Heap Leach _____

Mineral or Commodity Produced: Uranium

Mineral Estate Owner: Name State of New Mexico Commissioner of Public Lands
Address P.O. Box 1148, Santa Fe, NM 87504-1148
Telephone 827-5760

Surface Estate Owner: Name State of New Mexico Commissioner of Public Lands
Address P.O. Box 1148, Santa Fe, NM 87504-1148
Telephone 827-5760

Mineral Estate Classification: (Please check)

State X Federal _____ Indian _____ Private _____

I hereby swear or affirm that the information
herein provided is true, complete and correct.

[Signature]
Signature

Title: General Manager
Address: P.O. Box 218
Grants, NM 87020

Date: 10-10-89

DO NOT WRITE IN THIS SPACE

Registration Number Assigned _____
By: _____

Signature

Title: _____
Date: _____